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   protein search, using sw model
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AAW93878
   This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bovine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing bifiobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-BO)-(Ew-EO) is at least 0.15 are
                                                                                                      Claim 2; Page 3; 25pp; German.
                                                                                                                        Milk-derived peptides that stimulate Bifidobacterium bifidus
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                                                                                                                                                                               (FORS/) FORSSMANN W.
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ALIGNMENTS

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Bifidogenic peptide; protease; treatment; microbe-related disease; bacteria; fungi; yeast; protozoa; virus; mycoplasma; filaria; plasmodia; infection; inflammation; microbial induced tumour; degenerative disorder; diarrhoea; colic; oral microflora; intestinal microflora; caries; Bifidobacterium bifidum. vaginal microflora. Bifidobacterium bifidus stimulating peptide 14 27-AUG-2003 25-JUN-1999 25-MAR-1999 WO9914231-A2 (revised)
(first entry)

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Liepke ü 97DE-01040604 98DE-01005385 98WC-EP005899

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This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bowine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing Bifidobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-B0)-(Ew-E0) is at least 0.15 are selected where Bw = germ count after 16 hr culture of B. bifidus in 50% Elliker broth containing peptide at 0.2 mg/ml, B0 = germ count under
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Milk-derived peptides that stimulate Bifidobacterium bifidus.
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                                                       as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion, note: this segunce does not appear in the specification; it was created uing information provided
                                                                                                                                                                                                                                                                                                                                                                                                                                 Compositions containing human lac treating e.g. anaemia, iron-stora rheumatoid arthritis, ulcerative
                                                                                                                                                                                                                                     AAW71180-83 represent N-terminally truncated human lactoferrin proteins. The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such lactoferrin variants and anti-infective activities as well as
                                                                                                                                                                                                                                                                                                                                                                                   Claim
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02-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                            2; Page;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PHARMING
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Van Berkel
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                                                                                                                                                                                                                                                                                                                                                                                                                                          containing human lactoferrin and variants - a . anaemia, iron-storage disease, inflammation, rthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                            70pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              97US-0036859P
98US-00017043
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                                                                                                                                                                                                                                                                                                                                                                               English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                12
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complement activation; inhibition;
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Pred.
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Sequence 687

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336

ARRARVVWCAVG ARRARVVWCAVG

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Query Match Best Local S Matches 12

Similarity

100.0%;

Score 65; DB 2; Pred. No. 0.0046;

Length 687;

Conservative

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RESULT
AAG7791
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                                                    Query Match
Best Local S
Matches 12
                                                                                                                              The sequence represents the human lactoferrin (hLF) protein variant hLF-SN. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence given in the sequence listing of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                  Van
                                                                                                         Sequence 687
                                                                                                                                                                                                                                                                                                                                            Use of lactoferrin for treatment of infectious diseases, inflammatory diseases and excess of heparin.
                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-648424/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-MAR-2000; 2000EP-00201110.
27-MAR-2000; 2000US-0193352P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiese; reperfusion injury; cytokine release; proteoglyca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human lactoferrin variant hLF-5N.
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                                                                                                                                                                                                                                                                                                                    Claim 10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Domain
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                                                    12;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mutant;
                                                                  Similarity
                        ARRARVVWCAVG 12
ARRARVVWCAVG
                                                                                                                                                                                                                                                                                                                 Page; 49pp; English.
                                                    Conservative
                                                                                                         AA;
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23. .26
/label= Cationic_domain
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                                                                100.0%;
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Pred. No. 0.0046;
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BXBXBXB

22-JAN-2002 AAG77910; AAG77910

(first entry)

standard;

protein;

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Human lactoferrin variant hLF-4N

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Query Match Best Local Matches

l Similarity 12; Conserv

100.0%; ilarity 100.0%; Conservative 0

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Score 65; DB Pred. No. 0.0; Mismatches

0.0046; DB 2;

Length 688, Indels

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ARRARVVWCAVG 12 ARRARVVWCAVG 348

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RESULT 5
ANWTINE
ANWTI
                                                         The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion. note: this segeunce does not appear in the specification; it was created uing information provided
Sequence 688 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Compositions containing human lactoferrin and variants - a treating e.g. anaemia, iron-storage disease, inflammation, rheumatoid arthritis, ulcerative colltis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW71182 standard; protein; 688 AA
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02-FEB-1998;
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anti-infective; coagulant; complement activation; inhibition;
LPS mediated activation; myelopoiesis; growth promotion;
intestinal epithelial cell; hydroxyl-radical formation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mutant
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                                                                                                                                                                                                                                                                                                                                                                                                 AAW71180-83 represent N-terminally truncated human lactoferrin proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 2; Page; 70pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PHAR-) PHARMING BV
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98US-00017043
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           anti-viral;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        are used
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         tumours,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
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Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiese; reperfusion injury; cytokine release; proteoglycan;

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RRSSULT 7
AAW7111 ID AAW7
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Best Local S
Matches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The sequence represents the human lactoferrin (hLF) protein variant hLF-4N. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence given in the sequence listing of the specification
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Domain
                                                                          Human; lactoferrin protein; variant; anti-inflammatory; anti-viral; anti-infective; coagulant; complement activation; inhibition; LPS mediated activation; myelopoisesis; growth promotion; intestinal epithelial cell; hydroxyl-radical formation;
  Synthetic
                                                                                                                                                                                                                  Mutant human lactoferrin protein designated hLF-3N.
                                                                                                                                                                                                                                                                            27-OCT-1998
                                                                                                                                                                                                                                                                                                                               AAW71181;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Use of lactoferrin for treatment of diseases and excess of heparin.
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                                                                                                                                                                                                                                                                                                                                                                                AAW71181 standard;
                                                      intestinal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
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                                                      iron
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                                                      uptake;
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24. .27
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                                                         excretion
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0.0046;
thes 0;
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of intestinal myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion. Note: this seguence does not appear in the specification; it was created using information provided
                                                                                                                                                                                 excess of heparin, gastroenteritis; inflammatory be anaemia; myelopoieses; reperfusion injury; cytokine mutant; mutein; hLF-3N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Compositions containing human lactoferrin and variants - are used for treating e.g. anaemia, iron-storage disease, inflammation, tumours, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                  Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 689
                                                                                                                                                                                                                        Human;
                                                                                                                                                                                                                                                  Human lactoferrin variant hLF-3N.
                                                                                                                                                                                                                                                                                                      AAG77909;
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                                                                            WO200172322-A2
                                                                                                                                                       Homo sapiens
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                                                                                                                                                                                                                                                                                                                               AAG77909 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The lactoferrin variants bind heparin with lower affinity than
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02-FEB-1998;
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                                                                                                                                                                                                           lactoferrin; hLF; infectious disease; inflammatory disease; of heparin; gastroenteritis; inflammatory bowel disease; se
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Matches 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human; lactoferrin protein; variant; anti-inflammatory; anti-
anti-infective; coaquiant; complement activation; inhibition;
LPS mediated activation; myelopoiesis; growth promotion;
intestinal epithelial cell; hydroxyl-radical formation;
intestinal iron uptake; excretion.
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Compositions containing human lactoferrin and variants - a treating e.g. anaemia, iron-storage disease, inflammation,
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02-FEB-1998;
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                                                                               The sequence represents the human lactoferrin (hLF) protein vari
2N. The invention relates to novel methods of treatment using hi
of lactoferrin. The methods of the invention are useful for the
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ment using high doses
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or prophylaxis of infectious diseases, inflammatory diseases of heparin e.g. gastroenteritis, inflammatory bowel disease, anaemia, myelopoieses, reducing reperfusion injury, cytokine

release and and excess

treatment

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ពួកព្រះព្រះ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 11
The invention describes a method of producing a heterologous polypeptide CC (I) in a grain of a plant, comprising culturing a transformed plant (P1) comprising a first chimeric gene, and optionally, at least one heterologous transcription factor that is capable of enhancing the expression of the chimeric gene, to form a grain producing transforming plant (P2), and recovering transgenic grains containing (I) from P2. The method is useful for producing heterologous polypeptide in a grain of a plant. (I) is a non-plant storage, human or non-human animal, milk or other than a milk polypeptide, antibodies, cytokines, lymphokines, chemokines, hormones, growth factors, coagulation factors, anticheditives, or cytotoxins, or anti-inflammatory molecule or intestinal trefoil factor (ITF) or its active fragment. Preferably, (I) is lactoferrin, lysozyme, lactoferricin, ITF, epidermal growth factor (EGF), keratinocyte growth factor (KGF), insulin-like growth factor (IGF-I), lactoferin, kappa-casein, haptocorrin, lactoperoxidase, alpha-1-casein, immunoglobulins, alpha-lactalbumin, beta-lactoglobulin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
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Best Local (
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                                                                                                                                                                                                                                                                         Exampe 15;
                                                                                                                                                                                                                                                                                                                     Producing heterologous polypeptide in plant grain, by culturing transformed plant to form a grain-producing transforming plant, and recovering transgenic grains containing polypeptide from transformed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  14-FEB-2001; 2001US-0269188P.
14-FEB-2001; 2001US-0269199P.
02-MAY-2001; 2001US-00847232.
                                                                                                                                                                                                                                                                                                           plant
                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14-FEB-2002; 2002WO-US004909
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transformed plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Codon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29-NOV-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ABG80724 standard; protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (VENT-)
                                                                                                                                                                                                                                                                                                                                                                                                     2002-657592/70
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein;
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                                                                                                                                                                                                                                                                         Page 117; 230pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein expression.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          heterologous transcription factor; transgenic plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entry.
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Pred. No. 0.0
); Mismatches
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RESULT 12
AAE27884
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Best Local
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                   The invention relates to improved feed for production animals, comprising one or more plant-derived feed ingredients, substantially unsupplemented with small-molecule antibiotics and as an additive a seed composition containing a flour, extract or malt obtained from mature monocot seeds and one or more heterologous seed-produced anti-microbial proteins in substantially unpurified form. The invention is useful as a feed for production animals such as poultry and hoofed farm animals. The present sequence is human codon optimised lactoferrin. This sequence is used in the invention
                                                                                                                                                                       mature monocot
                                                                                                                                     Example 7;
                                                                                                                                                                                                                   N-PSDB; AAD45297
                                                                                                                                                                                                                                WPI; 2002-682708/73.
                                                                                                                                                                                                                                                      Huang
                                                                                                                                                                                                                                                                                                  14-FEB-2001;
02-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               alpha-casein, beta-casein, albumin,
This is the amino acid sequence of
producing a transgenic plant
                                                                                                                                                                     Improved feed for production animals, comprising plant-derived feed ingredients, and seed composition containing flour, extract, or malimature monocot seeds and heterologous seed-produced anti-microbial
                                                                                                                                                                                                                                                                             (VENT-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human; feed
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-DEC-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAE27884 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 690 AA;
                                                                                                                                                                                                                                                                                                                                                                                WO200263975-A2
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                                                                                                                                     Page 148-150; 175pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 improvement;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       optimised lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                  2001US-0269188P
2001US-00847232
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                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 319. .320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      poultry;
                                                                                                                                                                                                                                                                                                                                                                                                         /note=
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                                                                                                                                                                                                                                                      Hagie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      plant-derived feed; antibiotic; additive;
lactoferrin; flour; malt.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          690
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Pred.
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                                                                                                                                                                       extract, or malt anti-microbial
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Query Match Best Local S Matches 12

ch 100. 1 Similarity 100. 12; Conservative

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Score 65; DE Pred. No. 0.0); Mismatches

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Length 690;

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                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local S
Matches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The present sequence is that of human lactoferrin. The invention relates to a synthetic gene (see AAZ58122) that encodes human lactoferrin but which has codon usage designed to maximise expression in plants. Transgenic plants that express human lactoferrin in a tissue-specific manner, especially in the seeds, can be used in processes for the production of functional vegetal milk, fruit juices, fruit and/or vegetable homogenized foods (claimed). The transgenic plants are selected from solanaceae, cereals, leguminosae, fruit bearing plants and horticultural plants, especially soybean, tobacco and rice
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic polynucleotide encoding human lactoferrin, used of functional foods, vegetal milks and human lactoferrin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-161129/14.
N-PSDB; AAZ58122.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human lactoferrin.
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Human; lactoferrin; hLF; N-terminal; antimicrobial; heparin;
inflammatory response; cytokine production reduction;
                                                                Human lactoferrin (hLF).
                                                                                                                                                   AAB97382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 73-77; 93pp; English.
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                                                                                                        17-AUG-2001
                                                                                                                                                                                         AAB97382 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (PLAN-) PLANTECHNO SRL.
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                                                                                                                                                                                                                                                                                                                                                                                  12;
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                                                                                                        (first
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                                                                                                        entry)
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Pred. No. 0.0
0; Mismatches
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                                                                                                                                                                                                                                                       RESULT 15
AAG77906
ID AAG77
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Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Staphylococcus, Klebsiella or Escherichia species, considered and E. coli. Other uses include reducing monocytogenes, S. aureus and E. coli. Other uses include reducing inflammatory response by neutralising heparin or lipopolysaccharide or be reducing cytokine production and neutrophil degranulation, inhibiting entry of viruses such as cytomegalovirus, herpes simplex virus 1 or HIV into cells, inhibiting myelopolesis and reducing production of GM-CSF (granulocyte/macrophage colony stimulating factor)
                    Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiesis; reperfusion injury; cytokine release; proteoglycan.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This invention relates to fragments (between 6 and 26 amino acids) of the human lactoferrin hLF protein (represented by the present sequence). Noterminal hLF peptides have antimicrobial activity. The peptides of the invention are used to treat microbial infections, especially infections by gram positive or negative bacteria, particularly Listeria, Staphylococcus, Klebsiella or Escherichia species, especially L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New polypeptides comprising the N-terminal region of human lactoferrin protein exhibit higher antimicrobial activity than the full length protein and are useful to treat bacterial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 692 AA;
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                                                                                                                             Human lactoferrin.
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referred to in the claims"
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                                                                                                                                                                                                          The sequence represents the human lactoferrin (hLF) protein. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
Domain
                                                                                                                                                                                Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                 Claim 26; Page 47-49; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                             Use of lactoferrin for treatment of infectious diseases, inflammatory diseases and excess of heparin.
                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-648424/74.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Van Bree JBMM, Nuijens JH;
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27-MAR-2000; 2000US-0193352P
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ARRARVVWCAVG 352
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Copyright

GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd

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length: 0
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Match
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US-08-476-798-2
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US-08-453-703-2
US-08-453-703-2
US-08-453-703-2
US-08-453-703-2
US-08-456-106-2
US-08-456-116-2
US-08-456-116-2
US-08-456-118-2
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US-08-33-3-33-2
PCT-US-33-3-6814-2
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US-09-421-632-2
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ALIGNMENTS

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Sequence 2, Application
Patent No. 6066469
GENERAL INFORMATION:
APPLICANT: Virial
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Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 12; Conservative 0
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MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Ver

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/724,586

FILING DATE: 30-SEPT-1996

CLASSIFICATION DATA:

APPLICATION NUMBER: US 08/238,445

PRIOR APPLICATION DATA:

APPLICATION INFORMATION:

APPLICATION INFORMATION:

APPLICATION NUMBER: 31,409

REGISTRATION NUMBER: 31,409

REGISTRATION NUMBER: 31,409
                                                                                                                                                                                                                                                                                                                                              TELEFAX: (202) 393-5350
INFORMATION FOR SEQ ID NO: :
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
TYPE: amino acid
TOPOLOGY: linear
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APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
TITLE OF INVENTION: Cloning, Expression, and Uses of
TITLE OF INVENTION: Lactoferrin
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 638-6666
                                                                                                                                                                                                                                                                   MOLECULE TYPE:
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Pred. No.
                Mismatches
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RESULT 3
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US-09-421-632-2
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Patent No. 6455687
GENERAL INFORMATION:
APPLICANT: Kruzel, Marian L.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Kurecki, Tomasz
APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
TITLE OF INVENTION: Cloning, Expression, and Uses of Human
TITLE OF INVENTION: Lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 694 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W. CITY: Washington D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W.
                                                                      Kurecki, Tomasz
Gollnick, Paul D.
Doyle, Darrell J.
TITLE OF INVENTION: Cloning, Expression, and Uses of Human
Lactoferrin
                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                     343 ARRARVVWCAVG 354
                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    , Application US/09421632 6277817
                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (202) 638-6666
                                                                                                                                                                                                                                                                                                                                                                                                                                    100.0%; Score 65; DB 3; 100.0%; Pred. No. 0.0032;
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APPLICATE
FILING DATE: 30-WAL
CLASS FFICATION: 435-
CLASS FFICATION DATA:
PRIOR APPLICATION UNMER: 07/992,538
FILING DATE: December 17, 1992
ATTORNEY/AGENT INFORMATION:
WAME: SCOTT, WATSON T.
WAME: SCOTT, WATSON T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Loc
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: (202) 638
TELEPAX: (202) 393-5:
INFORMATION FOR SEQ ID NO: 2:
SEQUIENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: FR PC-DOS/MS-DOS
COERRATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
STREET: 1100 NEW YORK AVE. N.W., NINTH FLOOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Teng, Christina
APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1100 NEW
                                                                                                                                                              APPLICATION NUMBER: US/08/655,640 FILING DATE: 30-MAY-1996
                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
ZIP: 20005-3918
                                                                                                                                                                                                                                                                                                                                                                                    STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'Match 100.0%; Score 65; DB 4;
Local Similarity 100.0%; Pred. No. 0.0032;
Les 12; Conservative 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/724,586
FILING DATE: 30-SEPT-1996
APPLICATION NUMBER: US 08/238,445
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKST NUMBER: 10505/P58185C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 638-6666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             343 ARRARVVWCAVG 354
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH: 694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20004
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                                                                                                                                                                                                                                   Version
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Gaps

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TELECOMMENT
TELEPAN: (202) 802-9944
TELEFAX: (202) 822-9944
TELEFAX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 705 amino acids
TYPE: amino acid
TYPE: amino acid
TYPE: length: 705 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-655-640-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/08655640
Patent No. 5948613
GENERAL INFORMATION:
APPLICANT: Teng, Christina
APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
                                                                Query Match
Best Local Similarity
Matches 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100
Matches 12; Conservative
                                                                                                                                                                                                                                    TELEX: 6714627 CUSH INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 07/992,538
FILING DATE: December 17, 1992
ATTORNEY/AGENT INFORMATION:
NAME: SCOTT, WATSON T.
REGISTRATION NUMBER: 26,581
REFERENCE/DOCKET NUMBER: WTS/5683/98019/SAP
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZIP: 20005-3918

COMPUTER READABLE FORM:

MEDIUM TYPB: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                TYPE: amino acids
TOPOLOGY: lin-
OLECUIE TO
                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 708 amino acid
                                                                                                                                                  MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REFERENCE/DOCKET NUMBER: WI
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 30-MAN CLASSIFICATION: 435
                                                                                                                                                                                                                                                                    TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
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                            1 ARRARVVWCAVG 12
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1100 NEW YORK AVE. N.W., NINTH FLOOR
                                                                100.0%; ilarity 100.0%; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-MAY-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  100.0%; Score 65; DB 2; Length 705; 100.0%; Pred. No. 0.0032;
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                                                                Score 65; DB 2; Length 708; Pred, No. 0.0032; Indels
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                                                                  Gaps
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RESULT 7
US-08-461-333-2
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US-08-154-019-2
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                                                                                                                              Query Match
Best Local Similarity
Matches 12; Conserv
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Patent No. 5633
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                                                                                                                                                                                                                                                                                                                                     FELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                         amino acid
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360 ARRARVVWCÁVG 371

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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PACENTIN RELEASE #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/154,019
FILING DATE: 16-NOV-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/461,333
FILING DATE: 05-UN-1995
APPLICATION NUMBER: US 08/077,788
FILING DATE: 05-UN-1993
PRIOR APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UN-1993
PRIOR APPLICATION NUMBER: US 077,788
FILING DATE: 15-UN-1993
PRIOR APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-UN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-UN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
NAME: Liebescheutz, Joe O.
                                                                                                                                                                                                                                                                                                                                       TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Libbeschautz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 165
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Tower,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: One Market E
CITY: San Francisco
STATE: California
358 ARRARVVWCAVG 369
                                              1 ARRARVVWCAVG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08154019
                                                                                                                                                                                                                                                                                         709 amino acids
                                                                                          100.0%; ilarity 100.0%; Conservative 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Strijker, Rein
Heyneker, Herbert L.
Platenburg, Gerald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deboer, Herman A.
                                                                                                                                                                                                                                                                                                                                                                                        415-543-9600
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er, Frank
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                                                                                       Score 65; DB 1; L
Pred. No. 0.0032;
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                                                                                                                                      Length 709;
                                                                                            Indels
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                                                                                          Gaps
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Sequence 2, Application US/08461333
Patent No. 5741957
PRINTER INFORMATION.
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В
                                                                                                     RESULT 8
US-08-464-167-2
                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: protein US-08-461-333-2
                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 12
                                Sequence 2, Application US/08464167
Patent No. 6013857
GENERAL INFORMATION:
APPLICANT: Deboer, Herman A.
                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: Deboer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION: 800
PRIOR APPLICATION UNDER: US 08/077,788
PILLING DATE: 15-JUN-1993
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/444,745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 05-JUN-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: One CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Krimpenfort, Paul J.A.

IIILE OF INVENTION: Production of Recombinant Polypeptides

TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE:
                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE
                                                                                                                                                                          358 ARRARVVWCAVG 369
                                                                                                                                                                                                         1 ARRARVVWCAVG 12
                                                                                                                                                                                                                                         12;
                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                          amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  E: Townsend and Townsend and Crew
One Market Plaza, Steuart Tower, Suite 2000
Deboer, Herman A.
Strijker, Rein
Heyneker, Herbert L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Strijker, Rein
Heyneker, Herbert L.
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                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                          100.0%; Score 65; DB 1; Length 709; 100.0%; Pred. No. 0.0032;
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US-09-158-313-2
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                                                                                                                                                                  Sequence 2, Application US/09158313
Patent No. 6066725
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                              Matches
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-UN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 415-543-5043 INFORMATION FOR SEQ ID NO:
                                                                                                              APPLICANT:
                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Tower,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
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ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: US 07/444,745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
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CURRENT APPLICATION DATA
                                                                                              APPLICANT:
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                                         APPLICANT:
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CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505 REFERENCE/DOCKET NUMBER: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 0:
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/464,167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE:
CANT: Platenburg, Gerald
CANT: Lee, Sang He
CANT: Pieper, Frank
CANT: Krimpenfort, Paul J.A.
CANT: Krimpenfort, Paul J.A.
OF INVENTION: Production of Recombinant Polypeptides
OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                    358 ÁRRÁRVVWCÁVG 369
                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                        1 ARRARVVWCAVG 12
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12; Conservative
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Tee, Frank
                                                                                                              Strijker, Rein
Heyneker, Herbert L.
                                                                                                                                                      Deboer,
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                                                                                                                                                    Herman A.
                                                                                                                                                                                                                                                                                                                                                                                               100.0%; Score 65; DB 3; 100.0%; Pred. No. 0.0032;
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; MOLECULE TYPE:
US-09-158-313-2
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                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/08476798 Patent No. 6140552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
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Best Local
                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 1699
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 415-543-5043
NFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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APPLICANT:
APPLICANT:
APPLICANT:
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APPLICANT:
APPLICANT:
APPLICANT:
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PRIOR APPLICATION DATA:
APPLICATION UNMER: US 07
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
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MEDLUM TYPE: Floppy disk
COMPUTER: IBM, PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION NUMBER: US/09/158,313
APPLICATION NUMBER: US/09/158,313
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
                                    NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Crew
ANDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower, Suite 2000
                                                                                           APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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TYPE: amino acid
TYPE: linear
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STATE: California
  CITY: San Francisco
STATE: California
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Similarity 100.0%; Pred. No. 0.0032;
12; Conservative 0; Mismatches 0
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One Market Plaza, Steuart Tower, Suite 2000
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415-543-5043
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Lee, Sang He
Pieper, Frank
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Heyneker, Herbert L.
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US-08-145-681-2
                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                         GENERAL IMPORMATION:
APPLICANT: Conneely, Orla M.
APPLICANT: Headon, Denis R.
APPLICANT: O'Malley, Bert W.
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                               APPLICANT: May, Gregory S.
TITLE OF INVENTION: Produc
TITLE OF INVENTION: and La
                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                         STREET: 910 LC
                                                                                                                        COUNTRY: UZIP: 77002
                                                                                                                                                                                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/08145681
                                                                                                                                                               Texas
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E: Baker & Botts, L.L.P. 910 Louisiana St

and Lactoferrin Po Various Organsims

Production of Recombinant Lactoferrin

Polypeptides Using cDNA Sequences

USA

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TOPOLOGY: linear; MOLECULE TYPE: protein US-08-476-798-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 800
CLASSIFICATION: 800
PRIOR APPLICATION NUMBER: US 08/077,788
APPLICATION NUMBER: US 08/077,788
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
**DOTTCATION NUMBER: US 07/619,131
**DOTTCATION NUMBER: US 07/619,131
                                                                           Query Match 100.0%;
Best Local Similarity 100.0%;
Matches 12; Conservative 0
                                                                                                                                                                                                                                                                                  TELEFAX: 415-54
INFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REGERENCE/DOCKST NUMBER: 16994-003125
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                            FORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 07
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
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OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 07-JUI
                                                                                                                                                                                                                      LENGTH: 709 amino acids
TYPE: amino acid
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                                                                                                                                                                                                                                                                                                                           TELEPHONE:
358 ARRARVVWCAVG 369
                                    1 ARRARVVWCAVG 12
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                                                                                0
                                                                                                   Score 65; DB 3;
Pred. No. 0.0032;
                                                                                Mismatches
                                                                                                                    Length 709
                                                                                0
                                                                                Gaps
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TOPOLOGY: linear

MOLECULE TYPE: protein

HYPOTHETICAL: YES

ANTI-SENSE: NO

ORIGINAL SOURCE:

ORIGINAL SOURCE:

ORIGINES: H. sapiens

US-08-145-681-2
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                                              FILING DAIL.

CLASSIFICATION: 530

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/873,304

FILING DATE: 24-APR-1992

ATTORNEY/AGENT INFORMATION:
NAME: Adder Ph.D., Benjamin A.
REGISTRATION NUMBER: 35,423

REGISTRATION NUMBER: 05456

TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 2, Application US Patent No. 5571896 Patent No. 5571896 5571896
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                                     TELEFAX: 7136515246
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
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                                                                                                                                                                                                                                 ZIP: 77010-3095
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                  SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Fulbright & Jaworski Patent Department STREET: 1301 McKinney St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Conneely, Orla M.
APPLICANT: Headon, Denis R.
APPLICANT: O'Malley, Bert W.
TITLE OF INVENTION: Production of Recombinant Human
TITLE OF INVENTION: Lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: McGregor, Martin L.
REGISTRATION NUMBER: 29,329
REFERENCE/DOCKET NUMBER: 19928-0125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEPHONE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                             Texas
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amino acids
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US-08-154-019-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Application US/08154019 Patent No. 5633076
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Best Local Similarity 100.0%; Pred. No. 0.0032;
Matches 12; Conservative 0; Mismatches 0
                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/461,333
FILING DATE: 05-JUN-1995
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15 07/895,956
                                                                             TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: One .....
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                        FILING DATE: 01-DEC-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                              FILING DATE: 27-NOV-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 01-DEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 16-NOV-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower, Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 15-JUN-
PRIOR APPLICATION DATA:
MOLECULE TYPE:
                                                                                                                                     TELEPHONE: 415-543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
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                                                                                                                                                                            NAME: Liebescheutz, Joe O
REGISTRATION NUMBER: 37,50
REFERENCE/DOCKET NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                   TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                        LENGTH:
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                                                          711 amino acids
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Heyneker, Herbert
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                                                                                                     4:
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Matches

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Query Match Best Local Similarity

100.0%; ilarity 100.0%; Conservative 0

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Length 711;

Score 65; DB 1; Pred. No. 0.0032; Mismatches

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                                       Query Match
Best Local (
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12; Conserv
  ARRARVVWCAVG 12
                          100.0%; Score 65; DB 1; ilarity 100.0%; Pred. No. 0.0032; Conservative 0; Mismatches 0
                                                      Length 711;
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RESULT 14
US-08-461-333-4
US-08-461-333-4
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                                              TELEPAX: 415-543-00. 1INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS: LENGTH: 711 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Pieper, Frank
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
                                                                                                                                                            NAME: Libbescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 165
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                         APPLICATION NUMBER: US 07/444,745 FILING DATE: 01-DEC-1989 ATTORNEY/AGENT INFORMATION:
                TOPOLOGY: 1i
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CLASSIFICATION:
                                                                                                                                                TELEPHONE:
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Heyneker, Herbert L.
Platenburg, Gerald
Lee, Sang He
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                                  linear
                protein
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Search completed: September Job time: 8.76 secs
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US-08-453-703-2
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                                                                                                                               Matches
                                                                                                                                                               Query Match
                                                                                                                                                 Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC_DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Ve
CURRENT APPLICATION DATA:
APPLICATION UNMBER: US/08/453,703
FILLING DATE: Concurrently herewith
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                        TELEFAX: 415-854-3694
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: May, Greg
TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/14
FILING DATE: OCTOBER 28,
ATTORNEY/AGENT INFORMATION:
NAME: Albert P. Halluin
                                                                                                                                                                                                                                ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 711 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 25
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET
                                                                                                                                                                                                                  ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                               TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: 10036
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   360 ARRARVVWCAVG 371
                                                                360 ARRARVVWCAVG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                ARRARVVWCAVG 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conneely, Orla M. Headon, Denis R. O'Malley, Bert W. May, Gregory S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Pennie & Edmonds
1155 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                 Conservative
                                                                                                                                                                                                                H. sapiens
                                                                                                                                                                                                                                                                                                                                                                                                  415-854-3660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Concurrently herewith
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Production of Recombinant Lactoferrin and Lactoferrin Polypeptides Using cDNA Sequences
                                                                                                                                 100.0%; Score 65; DB 1;
100.0%; Pred. No. 0.0032;
tive 0; Mismatches 0
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er 28, 1993
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                                                                                                                                                               Length 711;
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Minimum DB seq length: 0
Maximum DB seq length: 2000000000
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Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Run on:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
Published_Applications_AA:*

1: /cgn2_6/ptodata/2/pubpaa/US07_NEW_PUB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*

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6: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.pep:*

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13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*

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18: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep:*
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137.988 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-508-095-14
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Copyright (c) 1993 - 2004 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

15	14	13	12	11	10	9	80	7	თ	ហ	4	ω	2	1	Result
46	54	54	65	65	ტ	65	65	ტ ტ	о 6	65	65	65	65	65	Score
70.8	83.1	83.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	Query
77	708	234	711	711	711	711	711	711	709	694	690	690	690	359	Length
9	14	14	16	15	15	15	14	14	14	13	16	14	14	14	B
US-09-738-626-3901	US-10-169-297-8	US-10-169-297-35	US-10-408-765A-2000	US-10-440-464-69	US-10-341-434-218	US-10-341-434-202	US-10-170-221-4	US-10-169-297-9	US-10-170-221-2	US-10-023-096-2	US-10-639-835-4	US-10-077-381-4	US-10-076-816-4	US-10-169-297-49	HD
Sequence 3901, Ap	Sequence 8, Appli	Sequence 35, Appl		Sequence 69, Appl	Sequence 218, App	202	Sequence 4, Appli	Sequence 9, Appli	,2	Sequence 2, Appli	4,	4,	Sequence 4, Appli	49, A	Description

; Sequence 4, Application US/10076816
; Publication No. US20030056244A1

4 5	44	43	42	41	40	39	38	37	36	ω 5	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
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-10-437-963-10534	-10-424-599-1889	-10-437-963-14991	-10-276-774-250	10-424-599-1499	-10-425-114-450	-10-437-963-1514	-10-275-026A-144	-10-275-026A-11	-10-275-026A-10	-10-437-963-171	-10-408-765A-24	-10-425-114-700	-10-276-774-1833	-10-156-761-1096	-10-424-599-23049	-10-437-963-142	-10-282-122A-4770	-10-437-963-11385	-10-437-963-19253	-10-156-761-811	-10-282-122A-6535	-10-282-122A-657	-10-437-963-15428	-10-425-114-4946	-10-424-599-265	-10-156-761-1095	-10-437-963-1586	-09-847-208-102	-10-437-963-1
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ALIGNMENTS

RESULT 1 US-10-169-297-49

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Sequence 49, Application US/10169297;
Publication No. US20030171276A1
GENERAL INFORMATION:
APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masashi
APPLICANT: Murata, Masashi
INTILE OF INVENTION: Preventives and Remedies for Chronic
ITILE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
CURRENT PILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: US/10/169,297
CURRENT PILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR APPLICAT
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RESULT 4
US-10-639-835-4
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APPLICANT: Hagie, Frank E.
APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins in
TITLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022.US00
CURRENT APPLICATION UNMBER: US/10/077,381
CURRENT FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR APPLICATION NUMBER: US 09/847,232
PRIOR APPLICATION NUMBER: US 09/847,232
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2001-02-06
PRIOR FILING DATE: 2001-02-06
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR FILING DATE: 2001-02-06
PRIOR PRIOR PRICE DATE: 2001-03-02
PRIOR PRICE DATE: 2001-03-02
PRIOR PRICE DATE: 2001-05-02
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TITLE OF INVENTION: Feed Additive Compositions and Methods
FILE REFERENCE: 50665-8021.US00
CURRENT APPLICATION NUMBER: US/10/076,816
CURRENT FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 60/269,188
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 09/847,232
PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR PILING DATE: 2001-02-06
PRIOR FILING DATE: 2001-05-02
NUMBER OF SEQ ID NOS: 60
SOFTWARE: FASTSEQ for Windows Version 4.0
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-076-816-4
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Best Local S
Matches 12
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/10077381 Publication No. US20030074700A1
                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
SOFTWARE: FastSEQ for
                                                                                                                                                                                                                                                                                          ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                     ENGTH: 690
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                                                                                                                                                                                                       Local
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12; Conservative
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Pred. No. 0.008;
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Pred. No.
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                                                                                                                                                                                                                     DB 14;
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Matches 12; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR FILING DATE: 2001-02-06
PRIOR APPLICATION NUMBER: US 60/201,182
PRIOR FILING DATE: 2000-05-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 09/847,232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins in
TITLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022.US01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 35
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PRIOR FILING DATE: 2002-02-14
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CURRENT APPLICATION NUMBER: US/10/639,835
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Huang, Ning
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT FILING DATE:
                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/724,586
FILING DATE: 30-SEPT-1996
APPLICATION NUMBER: US 08/238,445
FILING DATE: 05-MAY-1994
                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E.
REGISTRATION NUMBER: 31,409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                             STREET: 400 Seven.
CITY: Washington D.C.
                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                  FILING DATE:
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400 Seventh St. N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kurecki, Tomasz
Gollnick, Paul D.
Doyle, Darrell J.
                                                                                                                                                                                                                                                                                                                                                          U.S.A.
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Publication No. US20030192068A1
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Best Local S
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TELEFAX: (202) 393-5350
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 638-6666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
            INFORMATION FO
SEQUENCE
                                                                                                                                                                     APPLICATION NUMBER: US/08/476,798
APPLICATION NUMBER: US 08/077,788
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: line
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Lee, Sang He
Pieper, Frank

Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: COMPUTER: IBM PC COMPATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTMARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/170,221
FILING DATE: 11-Un-2002
CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESSES: Townsend and Townsend and Crew
ADDRESSES: Townsend and Townsend and Crew
STREFT: One Market Plaza, Steuart Tower, Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
            NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKST NUMBER: 16994-003125
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
TELEPAX: 415-543-9643
WANTION FOR SEQ ID NO: 2
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
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STATE: California
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LENGTH: 709 amino acids
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Pred. No. 0.008;
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LENGTH: 711
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-169-297-9
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US-10-169-297-9
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                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
US-10-170-221-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: JP 11/374087
PRIOR FILING DATE: 1999-12-28
NUMBER OF SEQ ID NOS: 50
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 9, Application US/10169297 Publication No. US20030171276A1 GENERAL INFORMATION:
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Matches 12; Conserv
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                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/10170221
Publication No. US20030192068A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masashi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies
TITLE OF INVENTION: Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT FILING DATE: 2002-10-31
                                                                                                                                                                                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
es 12; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein sequence DESCRIPTION: SEQ ID NO:
ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower,
                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          358 ARRARVVWCAVG 369
                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                360 ARRARVVWCAVG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 ARRARVVWCAVG 12
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                                                                                                                                                                                                                                                                                                                                            INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
                                                                       CITY: San Francisco
STATE: California
                                                      COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            100.0%; ilarity 100.0%; Conservative 0
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ilarity 100.0%;
Conservative 0
                                                                                                                                                                 Striker, Rein
Striker, Rein
Heyneker, Herbert L.
Platenburg, Gerald
Lee, Sang He
Pieper, Frank
Krimpenfort, Paul J.A.
Krimpenfort, Paul J.A.
INVENTION: Production of Recombinant Polypeptides
and Transgenic Methods
                                                                                                                                                                                                                                                                                                                       Deboer, Herman A.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 65; DB 14;
Pred. No. 0.0082;
D; Mismatches 0
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. 0.0082;
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                                                                                                            Tower, Suite 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 709;
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TYPE: amino acids
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 4:
US-10-170-221-4
                                                                                                                                                                                   ; ORGANISM: Homo sapiens
US-10-341-434-202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RESULT 9
US-10-341-434-202
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                                                                                                                                                                                                                                       TITLE OF INVENTION: Differentially Regulated Prostate Cancer Genes FILE REFERENCE: 9U 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
PRIOR APPLICATION NUMBER: US 60/348,164
PRIOR FILING DATE: 2002-01-15
NUMBER OF SEQ ID NOS: 238
SOPTWARE: Patentin version 3.1
SEQ ID NO 202
LENGTH: 711
                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 202, Application US/1034
Publication No. US20030215835A1
GENERAL INFORMATION:
APPLICANT: OriGene Technologies
                                                                                                                  Query Match
Best Local
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                                                                                                                                                                                                                                TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
TELEPAX: 415-543-5043
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
  360 ARRARVVWCAVG 371
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      360 ARRARVVWCAVG 371
                                                                                               12;
                                           1 ARRARVVWCAVG 12
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FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPETARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/10/170,221 FILING DATE: 11-Jun-2002 CLASSIFICATION: Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/10341434
o. US20030215835A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION DATA:
                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                   100.0%; Score 65; DB 15;
100.0%; Pred. No. 0.0082;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%; Score 65; DB 14;
100.0%; Pred. No. 0.0082;
tive 0; Mismatches 0
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US-10-440-464-69
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                                                                                                                                                                                             SEQ ID NO 69
LENGTH: 711
TYPE: PRT
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Best Local S
Matches 12
                                                                                            Query Match
Best Local (
                                                                                Matches
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SEQ ID NO 218
LENGTH: 711
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 69, Appublication No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/448,922
PRIOR FILING DATE: 2003-02-24
PRIOR APPLICATION NUMBER: 60/448,874
PRIOR FILING DATE: 2003-02-24
NUMBER OF SEQ ID NOS: 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: NOVEL BIOMARKERS OF TYROSINE KINASE INHIBITOR EXPOSURE TITLE OF INVENTION: AND ACTIVITY IN MAMMALS FILE REFERENCE: 038602/1592
CURRENT APPLICATION NUMBER: US/10/440,464
CURRENT FILING DATE: 2003-05-19
PRIOR APPLICATION NUMBER: 60/380,872
PRIOR FILING DATE: 2002-05-17
PRIOR FILING DATE: 2002-05-17
                                                                                                                                                                                                                                                     SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: DEPRIMO, SAMUEL APPLICANT: O'FARRELL, ANN. APPLICANT: MORIMOTO, ALYS. APPLICANT: SMOLICH, BEVER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: US 60/348,119
PRIOR FILING DATE: 2002-01-15
NUMBER OF SEQ ID NOS: 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: OriGene Technologies
TITLE OF INVENTION: Differentially Regulated Prostate Cancer Genes
FILE REFERENCE: 9U 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
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360 ARRARVVWCAVG 37:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       360 ARRARVVWCÁVG 371
                                                                            1 Similarity 100 12; Conservative
                                     1 ARRARVVWCAVG 12
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12; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     O'FARRELL, ANNE-MARIE
MORIMOTO, ALYSSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMOLICH, BEVERLY
MANNING, WILLIAM
WALTER, SARAH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHERRINGTON, JULIE SCHILLING, JIM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/10440464 o. US20040018528A1
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                                                                        100.0%; Score 65; DB 15; 100.0%; Pred. No. 0.0082; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 65; DB 15;
Pred. No. 0.0082;
                                                                                                             DB 15; Length 711;
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                                                                        0;
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US-10-408-765A-2000

GENERAL INFORMATION:

APPLICANT: Ghosh, Soumitra S.
APPLICANT: Fahy, Eoin D.
APPLICANT: Zhang, Bing

APPLICANT: APPLICANT:

Gibson, Bradford W. Taylor, Steven W. Glenn, Gary M.

Sequence 2000, Application US/10408765A Publication No. US20040101874A1

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Sequence 35, Application US/10169297

publication No. US20030171276A1

GENERAL INFORMATION:

APPLICANT: Tohdoh, Naoki

APPLICANT: Murata, Massahi

APPLICANT: Enjoji, Takashi

APPLICANT: Enjoji, Takashi

FILE OF INVENTION: Preventives and Remedies for Chronic

TITLE OF INVENTION: Hepatitis

FILE REFERENCE: 3435.1000-000

CURRENT APPLICATION NUMBER: US/10/169,297

CURRENT FILING DATE: 2002-10-31

PRIOR APPLICATION NUMBER: PCT/D00/09393

PRIOR FILING DATE: 2000-12-28

PRIOR FILING DATE: 1999-12-28

NUMBER: OF SCT IN NOSE: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; TYPE: PRT; ORGANISM: Homo sapiens US-10-408-765A-2000
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                                                             RESULT 14
US-10-169-297-8
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APPLICANT: WATNOCK Daie E.
TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
FILE REFERENCE: 660088.465
CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT FILING DATE: 2003-04-04
NUMBER OF SEQ ID NOS: 3077
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2000
LENGTH: 711
                                                                                                                                                                                                                                                                                                                              SOFTWARE: FastSEQ for Windows Version 4.0
SEC ID NO 35
SEC ID NO 35
TYPE: 234
TYPE: PRT
ORGANISM: Bos taurus
Sequence 8, Application US/10169297 Publication No. US20030171276A1 GENERAL INFORMATION:
                                                                                                                                                                                                                           Query Match 83.
Best Local Similarity 83.
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     / Match 100.0%;
Local Similarity 100.0%;
les 12; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        360 ARRARVVWCAVG 371
                                                                                                                                              71
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                                                                                                                                                                                   1 ARRARVVWCAVG 12
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                                                                                                                                                                                                                                                 83.1%;
83.3%;
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Pred. No. 0.23;
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                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                       DB 14; Length 234;
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Search completed: September Job time: 29.36 secs

1, 2004, 00:49:18

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RRLRTSWCAVG

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FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
PRIOR APPLICATION NUMBER: JP 99/377484
PRIOR APPLICATION NUMBER: JP 09/377484
PRIOR FILING DATE: 1999-12-16
PRIOR FILING DATE: 1999-12-16
PRIOR FILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR APPLICATION NUMBER: JP 00/280988
PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
SOPTWARE: PACENTLIN Ver. 3.0
SEQ ID NO 3901
LENGTH: 77
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: MUTATA, Masashi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies for Chronic
TITLE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT FILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR APPLICATION NUMBER: JP00-12-28
PRIOR FILING DATE: 1000-12-28
PRIOR FILING DATE: 1999-12-28
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NUMBER OF SEQ ID NOS: 50
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US-09-738-626-3901
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SEQ ID NO 8
LENGTH: 708
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Best Local Similarity 83.3
Matches 10; Conservative
                                                                          Query Match 70.8%;
Best Local Similarity 72.7%;
Matches 8; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: NAKAGAWA, SATOSHI APPLICANT: MIZOGUCHI, HIROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masa
APPLICANT: Enjoji, Taka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF
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                                                                                                                                                                                    ORGANISM: Corynebacterium glutamicum
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INVENTION: NOVEL POLYNUCLEOTIDES
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                                     2 RRARVVWCAVG 12
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OCHIAI, KEIKO
YOKOI, HARUHIKO
TATEISHI, NAOKO
SENOH, AKIHIRO
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Gapop 10.0 , Gapext 0.5
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Copyright (c) 1993 - 2004 Compugen Ltd.
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A; Molecule type: mRNA A; Residues: 20-31 <st1> A; Accession: \$20841 A; Molecule type: protein A; Residues: 20-28, 'X', 30-31 <st2></st2></st1>	A;Title: Expression of cloned human lactoferrin in baby-hamster kidney cells. A;Reference number: S15853; MUID:91264786; PMID:2049066 A;Accession: S15853 A;Status: nucleic acid sequence not shown; not compared with conceptual translation A;Status:	A; Molecule type: mkwA A; Residues: 3-711 <pon> A; Cross-references: EMBL:X52941; NID:g34411; PIDN:CAA37116.1; PID:g34412 A; Stowell, K.M.; Rado, T.A.; Funk, W.D.; Tweedie, J.W. Biochem. J. 276, 349-355, 1991</pon>	A; Experimental source: pracental backbone (NCBIP:122202) A;Note: sequence extracted from NCBI backbone (NCBIP:122202) R;Powell, M.J.; Ogden, J.E. Nucleic Acids Res. 18, 4013, 1990 Nicleic Rocids Res. 18, 4013, 1990 A;Title: Nucleotide sequence of human lactoferrin cDNA. A;Reference number: S10324; MUID:90326549; PMID:2374734 A;Accession: S10324	A,Title: Differential molecular mechanism of the estrogen action that regulates lacto A,Reference number: A45401; MUID:93125571; PMID:1480183 A,Accession: A45401 A,Molecule type: DNA A,Residues: 1-15 <ten> A,Residues: 1-15 <ten> A,Cross-references: GB:552659; NID:g263311; PIDN:AAB24877.1; PID:g263312</ten></ten>	A;Cross-references: EMBL:U07643; NID:g467236; PIDN:AAB60324.1; PID:g467237 R;Rey, M.W.; Woloshuk, S.L.; deBoer, H.A.; Pieper, F.R. Nucleic Acids Res. 18, 5288, 1950 A;Title: Complete nucleotide sequence of human mammary gland lactoferrin. A;Reference number: S11228; MUID:90384839; PMID:2402455 A;Accession: S11228 A;Molecule type: mRNA A;Residues: 1-148',T',150-422',C',424-711 <rey> A;Cross-references: EMBL:X53961; NID:g34415; PIDN:CAA37914.1; PID:g34416 R;Teng, C.T.; Liu, Y; Yang, N; Walmer, D.; Panella, T. Mol machine and machi</rey>	RESULT 1 TPHUL lactotransferrin precursor [validated] - human N;Alternate names: lactoferrin C;Species: Homo sapiens (man) C;Date: 31-Mar-1992 #sequence revision 21-Nov-1997 #text change 08-Dec-2000 C;Accession: G01394; S1228; Ā45401; S10324; S15853; S20841; S07160; A61169; A31000; R;Cho, Y submitted to the EMBL Data Library, March 1994 A;Reference number: G06820 A;Accession: G01394 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA A;Molecule type: mRNA A;Molecule type: mRNA

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A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-703 <ALE>
A;Residues
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A;Title: Cloning and sequencing of the porcine lactoferrin A;Reference number: A45543; MUID:92367939; PMID:1503259
A;Accession: A45543
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C;Species: Sus scrofa domestica (domestic pig)
C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change
C;Accession: A45543; S24173
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A;Title: Human lactorransferrin: amino acid : A;Reference number: A31000; MUID:850,76667; PN
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Eur. J. Biochem. 241, 303-308, 1996
A;Title: Lactoferrin: similarity to diamine oxidase and A;Reference number: S74119; MUID:97054624; PMID:8898921
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Blood 70, 989-993, 1987
A;Title: Isolation of lactoferrin cDNA from A;Reference number: S07160; MUID:88001031; P
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A;Residues: 'G',23-24,'R',26-27,'XX',30-32 <HOU>
A;Experimental source: neutrophil granulocytes
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A; Residues: 3-701, 'SWKPVN' < PAN>
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A;Residues: 436-487, 'A',489-711 <RAD>
A;Residues: 436-487, 'A',489-711 <RAD>
A;Cross-references: EMBL:M18642; NID:g186815; PIDN:AAA86665.1; PID:g386855
A;Panella, T.J.; Liu, Y.; Huang, A.T.; Teng, C.T.
Cancer Res. 51, 3037-9043, 1991
A;Title: Polymorphism and altered methylation of the lactoferrin gene in normal leukocyt
A;Reference number: A61169; MUID:91235214; PMID:1674448
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;Residues: 20-140,142-1
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A;Molecule type: mRNA, A;Molecule type: mRNA, A;Molecule type: mRNA, A;Residues: 1-144,'V',146-163,'PP',166-339,'A',341-438,'Y',440-513,'R',515-708 <PII>A;Cross-references: BMBL:X57084; NID:g505; PIDN:CAA40366.1; PID:g506
R;Pierce, A.; Colavizza, D.; Benaissa, M.; Maes, P.; Tartar, A.; Montreuil, J.; Spik, Bur. J. Biochem. 196, 177-184, 1991
Bur. J. Biochem. 196, 177-184, 1991
A;Title: Molecular cloning and sequence analysis of bovine lactotransferrin. A;Reference number: S14110; MUID:91160550; PMID:2001696
A;Accession: S14110
A; Molecule type: mRNA
A; Residues: 1-65, 'PG',
A; Cross-references: GE
                                                                                           A;Title: Bovine lactoferrin mRNA: sequence, A;Reference number: JT0595; MUID:92028986; A;Accession: JT0595
                                                                                                                      A;Residues: 20-35;82-114;148-163,'PP',166-178,'V','P';183-190;205-212;230-239;304-339;59 R;Goodman, R.E.; Schanbacher, F.L. Biochem. Biophys. Res. Commun. 180, 75-84, 1991 A;Tile: Bovine lactoferrin mRNA: sequence, analysis, and expression in the mammary glanua, Reference number: JT0595; MUID:92028986; PMID:1718281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule type: mRNA
A;Residues: 1-708 <TSA>
A;Cross-references: GB:L08604; NID:g163269; PIDN:AAA30609.1; PID:g163270
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F;354-691/Domain: transferrin repeat homology <TRH2>
F;384-691/Domain: transferrin repeat homology <TRH2>
F;28-62,38-53,129-212,171-187,184-195,245-259,362-394,372-385,419-698,439-661,471-546,49
F;77,107,206,267/Binding site: iron (Asp. Tyr. Tyr. His) #status predicted
F;135/Binding site: carbonate (Arg) #status predicted
F;409,447,540,609/Binding site: iron (Asp. Tyr. Tyr. His) #status predicted
F;477/Binding site: carbonate (Arg) #status predicted
F;477/Binding site: carbonydrate (Asn) (covalent) #status predicted
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submitted to the EMBL Data Library, November 1990
A;Reference number: S14674
A;Accession: S14674
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A;Accession: I45919
A;Status: translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                  A; Molecule type:
A; Residues: 20-35
                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: mRNA
A; Residues: 3-144,'V',146-339,'A',341-438,'Y',440-513,'R',515-708
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A;Tittle: Nucleotide and primary amino acid sequence of porcine lactoferrin.
A;Reference number: 824173; MUID:92379101; PMID:1511016
A;Accession: 824173
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A;Accession: S18517
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A; Residues: 1-11, 'W',
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Best Local :
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   G',68-296,'S'
GB:M63502
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                              ,298-339,'A',341-708
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PID:g164614
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A;Accession: Pivol48

A;Molecule type: protein
A;Rosidues: 20-27, X', 29-37, X', 39-54, X', 56-59 < REJ>
A;Molecule type: protein
A;Residues: 20-27, X', 29-37, X', 39-54, X', 56-59 < REJ>
A;Molecule type: protein
Biophys. Acta 1121, 130-136, 1992
A;Title: Identification of the bactericidal domain of lactoferrin.
A;Reference number: $21756; MUID:92287941; PMID:159934
A;Accession: $21756
A;Accession: $21756
A;Molecule type: protein
A;Reference number: A56659; MUID:92287941; PMID:1599334
A;Accession: $21756
A;Molecule type: protein
A;Reference number: A56659; MUID:93253156; PMID:8486845
A;Accession: $20-25,302-308;359-366,'X',368-376,'X',378 < SHI>
C;Superfamily: transferrin transferrin repeat homology
C;Keywords: duplication; glycoprotein; iron; iron binding; metalloprotein; milk
F;1-19/Domain: signal sequence #status predicted < SIGs
F;20-708/Product: lactocransferrin repeat homology < TRH1>
F;36-60/Region: antimicrobial
F;36-59/Domain: transferrin repeat homology < TRH2>
F;36-60/Region: antimicrobial
F;38-55/Dismidide bonds: #status predicted
F;38-55/Dismidide bonds: #status predicted
F;38-19/Binding site: carbonate (Axg) #status experimental
F;48/JBinding site: carbonate (Axg) #status experimental
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R;Rejman, J.J.; Hegarty, H.M.; Hurley, W.L.

Comp. Biochem. Physiol. B 93, 929-934, 1989

A;Title: Purification and characterization of bovine lactoferrin from secretions A;Reference number: PL0148; MUID:90031466; PMID:2805645

A;Accession: PL0148
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Nucleic Acids Res. 18, 7167, 1990
A;Title: CDNA and protein sequence of bovine lactoferrin.
A;Reference number: S13097; MUID:91088328; PMID:2263492
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A; Residues: 28-33, 'D', 36-38, 'P', 40-708 < MEA>
A; Cross-references: EMBL: X54801
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A;Molecule type: protein
A;Residues: 20-47;59-66;132-139;256-277;278,305-332;343-351;361-363;586,587-589;598-619
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A; Residues: 28-38, 'P', 40-86, 'C', 88-708
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A;Accession: S13881
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R;Le Provost, F.; Nocart, M.; Guerin, G.; Martin, P
Biochem. Biophys. Res. Commun. 203, 1324-1332, 1994
A;Title: Characterization of the goat lactoferrin c
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                                                                                                                                                                                      .actoferrin
                                                                                   ;Species: Capra aegagrus hircus (domestic goat);Date: 20-Feb-1995 #sequence_revision 20-Feb-1995;Accession: JC3323
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Best Local
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Pred. No. 0.091;
0; Mismatches
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         lactoferrin cDNA:
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         assignment
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      Biochemistry 31, 12536-12542, 1992
A;Title: Purification and characterization of a carbonic anhydrase II inhibit A;Reference number: 147228; MUID:93099129; PMID:1463741
A;Recession: 147228
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-704 <ROUS
A;Cross-references: EMBL:U36916; NID:g1016329; PIDN:AAB58956.1; PID:g1016330 C;Genetics:
                                                                                                                                                                                                                                                                            carbonic anhydrase II inhibitor (transferrin homolog) precursor - C;Species: Sus scrofa domestica (domestic pig) C;Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 20 C;Accession: I47228 R;Roush, E.D.; Fierke, C.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
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lactoferrin precursor - mouse N;Alternate names: lartor C;Species ''
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C.Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_c
C.Accession: A28438, #A41005
R.Pentecost, B.T.; Teng, C.T.
A.T.Biol. Chem. 262, 10134-10139, 1987
A.T.Biol. Chem. 26
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A;Accession: JC2323
A;Molecule type: mRNA
A;Residues: 1-708 <LEP>
C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication; glycoprotein
F;359-656/Domain: transferrin repeat homology <TRH2>
F;252,300,387,495,564/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: EMEL:J03298
A;Cross-references: EMEL:J03298
I;Liu, Y; Teng, C.T.
J. Biol. Chem. 266, 21880-21885, 1991
A;Pitle: Characterization of estrogen-responsive mouse lactoferrin promoter.
A;Pitle: Characterization; PMUD:92042099; PMID:1939212
A;Cross-references: GB:M74778
A;Cross-references: GB:M74778
A;Cross-references: GB:M74778
C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication; glycoprotein
C;Keywords: duplication; glycoprotein
C;Keywords: duplication; glycoprotein
C;Toylogmain: signal sequence #status predicted <MAT>
F;358-995/Domain: transferrin repeat homology <TRH2-
F;358-995/Domain: transferrin repeat homology <TRH2-
F;358-995/Domain: transferrin repeat homology <TRH2-
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A; Residues: 3-707 < PEN>
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Pred. No. 0.14;
0; Mismatches
                                                                                                                                                                          Score 52; DB 1;
Pred. No. 0.21;
L; Mismatches
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#text_change 20-Aug-1999

II inhibitor from

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A; Molecule type: protein
A; Residues: 20-28, 'X', 30-38, 'X', 40-44 <GEN>
R; Chung, M.C.M.; Chan, S.L.; Shinizu, S.

Int. J. Biochem. 23, 609-616, 1991
A; Fitle: Purification of transferrins and lactoferrin using DEAE Affi-Gel Blue A; Reference number: A61573; MUID:91293379; PMID:2065820
A; Accession: B61573
A; Molecule type: protein
A; Residues: 20-28, 'X', 30-38, 'X', 40-43, 'S' <CHU>
R; Kingston, I.B.; Williams, J.
Biochem. J. 147, 463-472, 1975
A; Title: The amino acid sequence of a carbohydrate-containing fragment of A; Reference number: A90282; MUID:76039467; PMID:1172663
A; Accession: A90282
A; Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: protein
A; Residues: 1-3 < THI>
R; Williams, J.; Elleman, T.C.; Kingston, I.B.; Wilkins,
R; Williams, I.; Elleman, T.C.; Kingston, I.B.; Wilkins,
Eur. J. Biochem. 122, 297-303, 1982
A; Title: The primary structure of hen ovotransferrin.
A; Reference number: A91116, MUID:82138852; PMID:6895872
A; Accession: A91116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 24 Apr.1984 #sequence_revision 30-Sep-1993 #text_change 22-Jun-1999 C;Accession: A26845; A91115; A9254, A91115; A92645; R91115; A926474; B61573; A90262; S02476; R;Jeltsch, J.M.; Hen, R.; Maroteaux, L.; Garnier, J.M.; Chambon, P. Nucleic Acids Res. 15, 7643-7645, 1987
A;Title: Sequence of the chicken ovotransferrin gene. A;Reference number: A26845; MUID:88015626; PMID:3658709
A;Accession: A26845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: protein
A;Molecule type: protein
A;Residues: 1-50;54-82;VV,84-92;102-146;162-168;170-228;241-283;289-333;338-344;350-351
R;Gentili, C.; Bianco, P.; Neri, M.; Malpeli, M.; Campanile, G.; Castagnola, P.; Cancedd
J. Cell Biol 122, 703-712, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Note: the codons given for residues 132 (AAC) and 317 R;Thibodeau, S.N.; Lee, D.C.; Palmiter, R.D. J. Biol. Chem. 253, 3771-3774, 1978
A;Title: Identical precursors for serum transferrin and A;Reference number: A92229; MUID:78171533; PMID:649604
A;Accession: A92229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Jeltsch, J.M.; Chambon, P.

Bur. J. Biochem. 122, 291-295, 1982
A;Title: The complete nucleotide sequence of the chicken ovotransferrin mRNA
A;Reference number: A91115; MUID:82138851; PMID:7060577
A;Accession: A91115
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C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication
F;20-350/Domain: transferrin repeat homology <TRH1>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: mRNA
A;Residues: 1-82,'V',84-99,'I',101-153,'W',155-238,'LN',241-685,'N',687-705
A;Cross-references: EMBL:X02009
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A;Residues: 1-705 <JE1>
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87.5%;
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Pred. No. 5
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A, Molecule type: DNA
A, Residues: 1-260 <-TES
A, Residues: 1-260 <-TES
A, Residues: GB:AE002411; GB:AE002098; NID:g7225776; PIDN:AAF40979.1; PID:g722577
A, Experimental source: serogroup B, strain MC58
A, Experimental source: serogroup B, strain MC58
R; Parkhill, J.; Achtman, M.; James, K.D.; Bentley, S.D.; Churcher, C.; Klee, S.R.; Morel
; Holroyd, S.; Jagels, K.; Leather, S.; Moule, S.; Mungall, K.; Quail, M.A.; Rajandream,
Nature 404, 502-506, 2000
A; Title: Complete DNA sequence of a serogroup A strain of Neisseria menigitidis Z2491.
A; Reference number: A81775; MUID:20222556; PMID:10761919
               A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-260 <PAR>
A;Cross-references: GB:AL162754; GB:AL157959; NID:g7379424; PIDN:CAB84014.1; PID:g737945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             thiol-disulfide interchange protein dsbC homolog NMB0550 [imported] - Neisseria meningit C;Species: Neisseria meningitidis C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 02-Feb-2001 C;Accession: E81185; D81916
C;Accession: E81185; D81916
R;Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.; Eisen, J.A Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; Dougherty, B.A.; ri, H.; Qin, H.; Vyamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza, M. Science 287, 1809-1815, 2000
A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.; Vei A;Authors: Grandi, G.; Sun, L.; Smith, H.; Ve
A;Experimental source: serogroup C;Genetics:
A;Gene: NMB0550; NMA0730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Complete genome sequence of Neisseria meningitidis serogroup A;Reference number: A81000; MUID:20175755; PMID:10710307 A;Accession: E81185
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F;359-692/Domain: transferrin repeat homology <TRH2>
F;359-692/Domain: transferrin repeat homology <TRH2>
F;259-64,134-216,179-193,190-201,247-261,367-399,424-699,440-662,473-549,497-690/Disulfide F;39-55,377-390,589-603/Disulfide bonds: #status predicted F;492/Binding site: carbohydrate (Asn) (covalent) (partial) #status experimental F;492/Binding site: carbohydrate (Asn) (covalent) (partial) #status predicted
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A,Title: The amino acid sequences of cysteic acid-containing A,Feference number: A90246; MUID:70141846; PMID:4907959
A,Contents: annotation; disulfide bonds
R;Williams, J.; Moreton, K.
Blochem. U. 251, 849-885, 1988
B,Title: The dimerization of half-molecule fragments of trans A;Reference number: S02476; MUID:88326225; PMID:3415649
A;Accession: S02476
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                                                                                                                                                                                                                                                                                              A;Status: preliminary
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Pred. No. 8;
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Length 260;

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A.Experimental source: strain A3(2)
C;Genetics:
A;Gene: SCOEDB.57867
                                                                                                                                                                                                                                                                                                                                           hypothetical protein SCH69.07c - Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999 C;Accession: T36706
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replication initiation protein - Escherichia coli plasmids (;Species: Escherichia coli (;Species: Escherichia coli (;Species: Escherichia coli (;Date: 18-Dec-1981 #sequence_revision 17-Dec-1982 #text_change 16-Jul-1999 (;Accession: A03602; B03602; S01773; S05591; A48662; C28378; I41109 R;Rosen, J.; Ryder, T.; Inokuchi, H.; Ohtsubo, H.; Ohtsubo, E.
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A; Residues: 1-436 < MUR>
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submitted to the EMBL Data Library, June 1999
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                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-129 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothetical protein [imported] - Mycobacterium leprae
C/Species: Mycobacterium leprae
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                                                                                        RESULT 11
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Best Local S
Matches 10
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Best Local
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Best Local Similarity
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                                                                                                                                     ARRVDFARASWCVVG
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55.6%;
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Pred. No. 18;
2; Mismatches
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Pred. No.
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Pred. No. 7.
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Holroyd,
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A;Experimental source: plamid NR1
R;Dong, X.; Womble, D.D.; Rownd, R.H.
J. Bacteriol. 169, 5353-5363, 1987
A;Title: Transcriptional pausing in a region important for A;Reference number: A28378; MUID:88058738; PMID:2445727
A;Accession: C28378
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R;Dong, X.; Womble, D.D.; Rownd, R.H.
J. Mol. Biol. 202, 495-509, 1988
A;Title: In-vivo studies on the cis-acting replication initiator protein of IncFII plasm
A;Reference number: S01773; MUID:89011975; PMID:3050127
A;Accession: S01773
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Nucleic Acids Res. 16, 6493-6514, 1988

A;Title: RepA protein- and oriR-dependent initiation of A;Reference number: S05591; MUID:88289416; PMID:3041379

A;Accession: S05591
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A;Title: Genes and sites involved in replication and incompatibility
A;Reference number. A93119; MUID:81074309; PMID:7003300
A;Accession: A03602
                                                                                                                                                                                                                                                                                                                                                                R;Womble, D.D.; Sampathkumar, P.; Easton, A.M.; Luckow, V. Mol. Biol. 181, 395-410, 1985
A;Title: Transcription of the replication control region A;Reference number: 141106; MUID:85160860; PMID:2580099
A;Accession: 141109
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A;Molecule type: DNA
A;Residues: 1-50 <DO2>
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R, Jiang, T.; Min, Y.N.; Liu, W.; Womble, D.D.; Rownd, R.H.
R, Jiang, T.; Min, Y.S.; Signo, 1993
3. Bacteriol. 175, 5350-5358, 1993
A,Title: Insertion and deletion mutations in the repA4 region A,Reference number: A48662; MUID:93374828; PMID:8396115
A,Accession: A48662
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A;Molecule type: DNA
A;Residues: 270-285 <MAS>
A;Cross-references: EMBL;X12587; NID:g41107; PIDN:CAA31100.1; PID:g41108
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A; Residues: 1-285 < DON>
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A;Residues: 1-77 <ROS>
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A; Residues: 1-285 < R
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                                                                                                    A;Start codon: GTG
C;Superfamily: repl
C;Keywords: plasmid
                                                                                                                                                                                       A;Genome:
                                                                                                                                                                                                                                                            A;Cross-references: EMBL:X02302; NID:g42132; PIDN:CAA26168.1; PID:g581144
                              Query Match
Best Local
     Matches
                                                                                                                                                                                       plasmid
                              Similarity
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     Conservative
                                                                                                      protein
copy control
                              60.0%;
; Score 39; DB;
; Pred. No. 19;
1; Mismatches
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                                                          <u>,</u>
                                                          Length 285;
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        Gaps
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ARRARVVW

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p-hydroxybenzaldehyde dehydrogenase [imported] - Pseudomonas putida plasmid pRA4000
C;Species: Pseudomonas putida
C;Date: 18-Feb-2000 #sequence_revision 18-Feb-2000 #text_change 21-Jul-2000
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C;Species: Escherichia coli
C;pate: 07-Unr-1996 #sequence revision 07-Unr-1996 #text_change 26-Aug-1999
C;Accession: 164780; 141110 -
R;Ohtsubo, H.; Ryder, T.B.; Maeda, Y.; Armstrong, K.A.; Ohtsubo, E.
Adv. Biophys. 21, 115-133, 1986
A;Title: DNA replication of the resistance plasmid R100 and its control.
A;Reference number: I51821; MUID:86319522; PMID:3019092
A;Accession: I64780
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C;Species: Caulobacter crescentus
C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 20-Apr-2001
C;Accession: E87327
C;Accession: Escapence Complete Com
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A;Cross-references: GB:M26840; NID:g151770; PIDN:AAA26067.1; PID:g151773
A;Cross-references: GB:M26840; NID:g151770; PIDN:AAA26067.1; PID:g151773
A;Womble, D.D.; Sampathkumar, P.; Easton, A.M.; Luckow, V.A.; Rownd, R.H.
U. MOl. Biol. 181, 395-410, 1985
A;Title: Transcription of the replication control region of the IncFII R-plasmid
A;Reference number: 141106; MUID:85160860; PMID:2580099
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A;Molecule type: DNA
A;Residues: 1-350 <STO>
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A;Accession: E87327
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Pred. No. 22;
0; Mismatches
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Pred. No. 19;
1; Mismatches
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Search completed: September Job time : 9.96 secs

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                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein K09A11.5 - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Dace: 15-Oct_1999 #sequence_revision 15-Oct_1999 #text_change 18-Feb-2000 C;Accession: T23526
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                                                                                                                     A; Map position: 1
A; Introns: 20/3;
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                                                                                                                                                                                                                                                                                                                         submitted to the EMBL Data Library, A;Reference number: Z19752
                                                                                                                                                                                                                                                                                                                                                                    R;Coles, L.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Cronin, C.N.; Kim, J.H.; Fuller, J.; Zhang, X.P.; McIntire, W.S.
DNA Seq. 10, 7-17, 1999
A;Title: Organization and sequences of p-hydroxybenzaldehyde dehydrogenase and other
                                                                                                                                                                                                    A; Experimental source: clone K09All
                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-549 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 15
                                                                                                                                                                                                                       A;Cross-references: EMBL:Z50742; PIDN:CAA90618.1; GSPDB:GN00028; CESP:K09A11.5
                                                                                                                                                                                                                                                                                A;Status: preliminary; translated from GB/EMBL/DDBJ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Description: catalyzes oxidation of p-hydroxybenzaldehyde to p-hydroxybenzoic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: EMBL:U96338; NID:g4808503; PIDN:AAA75634.2; PID:g4808506
A;Experimental source: NCIMB 9866
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153.148 Million cell updates/sec
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SUMMARIES
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       PROSITE; PS00206; TRANSFERRIN_2; 2.
PROSITE; PS00207; TRANSFERRIN_3; 2.
Transport; Iron transport; Glycoprotein; Metal-binding; Repeat; Signal; 3D-structure.
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Matches 12
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MEDLINE=90384839; PubMed=2402455;
Rey M.W., Woloshuk S.L., de Boer H.A.,
"Complete nucleotide sequence of human
Nucleic Acids Res. 18:5288-5288(1990).
TISSUE=Prostate;

MEDLINE=22388257; PubMed=12477932;

Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,

Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

Klausner R.D., Collins F.S., Wagner L., Schaefer C.F., Bhat N.K.,

Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsieh F.,

Hopkins R.F., Jordan H., Moore T.A.A., Rubin G.M., Hong L.,

Diatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

Raha S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,

Raha S.S., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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submitted (MAY-1992)
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                                                                                                                                                                                                                                                                                                            TISSUE=Mammary gland;
Cheng H., Chen X., Huan L.;
"cDNA cloning and sequence analysis of human lactoferrin.";
Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wei X., Han J., Rado T.
"Human neutrophil lacto
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Liang Q., Jimenez-Flores
"Molecular cloning and se
Submitted (DEC-1991) to t
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Mutagenesis of the histidine ligand in human lactoferrin: iron binding properties and crystal structure of the histidine-
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         K-RAY CRYSTALLOGRAPHY (2.0 ANGSTROMS).
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                                                                                                                                                                                                                                                                                                                                                                                                      OF AN ANION, USUALLY BICARBONATE.
FUNCTION: LACTOFERROXINS A, B AND C HAVE OPICID ANTAGONIST
ACTIVITY. LACTOFERROXINS A, SHOWS PREFERENCE FOR MU-RECEPTORS, WHILL
LACTOFERROXIN B AND C HAVE SOMEWHAT HIGHER DEGREES OF PREFERENCE
FOR KAPPA-RECEPTORS THAN FOR MU-RECEPTORS.
SUBUNIT: MODORMET.
SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . Vision 4:31-32(1998).
FUNCTION: TRANSPERRINS ARE IRON BINDING CAN BIND TWO ATOMS OF FERRIC IRON IN ASS
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ARRARVVWCAVG
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ilarity 100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sommer J.R., Obrian G., Han L., Ahmed M.N., in P.-Y., Basti S., Reddy M.K., Kanai A., Hotta manickayel G., Munier F., Schorderet D.F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PubMed=9873069;
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                                                    Score 65; DB 1;
Pred. No. 0.0003;
Mismatches 0
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There are no restrictions
ong as its content is in
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essed in Aspergillus
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CO Equus

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PDB; 1BIX; 02-DEC-98.
PDB; 1B7U; 02-FEB-99.
PDB; 1B7Z; 02-FEB-99.
PDB; 1F9B; 10-FEB-01.
PDB; 116B; 13-FEB-02.
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SMART; SM00094; TREER; 2.

PROSITE; PS00205; TRANSFERRIN_2; 2.

PROSITE; PS00206; TRANSFERRIN_3; 1.

PROSITE; PS00207; TRANSFERRIN_3; 1.
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J. MOI. Biol. 289:303-317(1999).

I- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BOF AN ANION, USUALLY BICARBONATE.

I- SUBGUNIT: Monomer.

I- SUBGELULLAR LOCATION: Secreted.

I- DOMAIN: Composed of two homologous domains.

I- DOMAIN: Composed of two homologous family.
    DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for com
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PRINTS; PR00422; TRANSFERRIN.
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sharma A.K., Paramasivam M., Srinivasan A., Yadav M.P., Singh
Three-dimensional structure of mare diferric lactoferrin at :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lactotransferrin precursor
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AC P14632; Q29557;
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Best Local Similarity 91.7%;
Matches 11; Conservative
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                 STANDARD;
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PROSITE; PS00205; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 2; 2.

PROSITE; PS00207; TRANSFERRIN 3; 1.

PROSITE; PS00207; TRANSFERRIN 3; 1.
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EMBL; M81327; AAA31059.1; -.
EMBL; A45543; A45543.
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"Rapid purification of porcine colostral whey lactoferrin by affinity chromatography on single-stranded DNA-agarose. Characterization, amino acid composition and N-terminal amino acid sequence.";
Biochim. Biophys. Acta 999:323-329(1989).
-!- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING
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Mammalia; Eutheria;
NCBI_TaxID=9823;
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MEDLINE=90105538; PubMed=2605266;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE=92379101;
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J., Levine W.B., Teng C.T., Beattle C.W., sequencing of the porcine lactoferrin cDNA.", 23:251-256(1992)
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lley B.R., Saucedo
   Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Suina; Suidae; Sus.
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1132:97-99(1992).
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(Lactoferrin).
   LACTOTRANSFERRIN
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16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence upds
10-OCT-2003 (Rel. 42, Last annotation up
Lactotransferrin precursor (Lactoferrin)
TISSUE=Mammary gland;
Paramasivam M., Srini
                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
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Eukaryota; Metazoa;
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Kappeler S.R.,
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                                                                 STRAIN-Somali; TISSUE-Lactating mammary gland; Kappeler S.R., Ackermann M., Farah Z., Puhan Z.; "Sequence analysis of camel (Camelus dromedarius) Int. Dairy J. 9:481-486(1999).
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EMBL; AF165879; AAF82241.1; -.
PDB; IDTZ; 20-UN.01.
InterPro; IPRO01156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00405; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00206; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
Transport; Iron transport; Glycoprotein; Metal-binding; Repeat;
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TISSUE-Submaxillary gland;
MEDLINE-91160550, PubMed=2001696;
MEDLINE-91160550, PubMed=2001696;
Pierce A., Colavizza D., Benaissa M., Maes P., Tartar A.,
Montrevil J., Spik G.;
"Molecular cloning and sequence analysis of bovine lactotransferrin.";
"Molecular cloning and sequence analysis of bovine lactotransferrin.";
Eur. J. Biochem. 196:177-184(1991).
                                                                                                                                                                            SEQUENCE FROM N.A.

TISSUE-Blood, and Mammary gland;
TISSUE-Blood, and Mammary gland;
MEDILINE-9226164; PubMed-8206385;
Seyfert H.-M., Tuckoricz A., Interthal H., Koczan D., Hobom G.;
"Structure of the bovine lactoferrin-encoding gene and its promoter.";
Gene 143:265-269(1994).
[5]
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Tisang T.C., Burns D.K., Wang F., Pan.Y.C.E., Schmidt A.M., Stern D.;
Tsang T.C., Borns D.K. Wang F., Pan.Y.C.E., Schmidt A.M., Stern D.;
"Cloning of a 80-kD advanced glycosylation end product (AGE) binding
protein from bovine lung.";
PASEB J. 6:233-233(1991).
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DR EMBL; M63502; AAA306617; -...

DR EMBL; L08604; AAA306691; -...

DR EMBL; L19993; AAA21722.1; JOINED.

R EMBL; L19993; AAA21722.1; JOINED.

R EMBL; L19984; AAA21722.1; JOINED.

DR EMBL; L19986; AAA21722.1; JOINED.

DR EMBL; L19989; AAA21722.1; JOINED.

DR EMBL; L19996; AAA21722.1; JOINED.

DR EMBL; L19991; AAA21722.1; JOINED.

DR EMBL; L19992; AAA21722.1; JOINED.

DR EMBL; L19991; AAA21722.1; JOINED.

DR EMBL; L19991; AAA21722.1; JOINED.

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DR EMBL; L1991; AAA21722.
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Hwang P.M., Zhou N., Shan X., Arrowsmith C.H., Vogel H.J.;

"Three-dimensional solution structure of lactoferricin B, an antimicrobial peptide derived from bovine lactoferrin.";

Biochemistry 37:4288-4298(1998).

I-- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF EBERIC IRON IN ASSOCIATION WITH THE BINDING OF AN ANION, USUALLY BICARBONATE.

I-- FUNCTION: LACTOFERRICIN B IS AN ANTIMICROBIAL PEPTIDE.

I-- SUBCELLULAR LOCATION: Secreted.

I-- SUBCELLULAR LOCATION: Secreted.

I-- SUMCIALITY: Belongs to the transferrin family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Moore S.A., Anderson B.F., Groom C.R., Haridas M., Baker E.N.;
"Three-dimensional structure of diferric bovine lactoferrin at 2.8-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               resolution.";
J. Mol. Biol.
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R HSSP, O77698; ICE2.

R InterPro; IPR001156; Transferrin.

R Pfam; PF00405; transferrin; 2.

R Pfam; PF00402; TRANSFERRIN; 2.

R PROSITE; PS00204; TR FER; 2.

R PROSITE; PS00206; TRANSFERRIN[2; 2.

R PROSITE; PS00206; TRANSFERRIN[3; 2.

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Bovidae; Caprinae; Capra.
NCBI_TaxID=9925;
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MEDLINE-94380047; PubMed-8093048;
le Provost F., Nocart M., Guerin G., Martin P.;
le Provost F., Nocart M., Guerin G., Martin P.;
"Characterization of the goat lactoferrin cDNA. Assignment of the relevant locus to bovine UI2 syntemy group."
Biochem. Biophys. Res. Commun. 203:1324-1332 (1994).
I FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH IF FUNCTION: TRANSFERRINS ARE IRON IN ASSOCIATION WITH THE BINDING OF AN ANION, USUALLY BICARBONATE.
OF AN ANION, USUALLY BICARBONATE.
I SUBCULILAR LOCATION: Secreted.
I DOMAIN: Composed of two homologous domains.
I DOMAIN: Composed of two homologous domains.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUB-Mammary gland;
Lee T., Yu S., Kim S., Lee K., Yu D.;
Submitted (APR-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
Transport;
Signal.
SIGNAL
CHAIN
REPEAT
REPEAT
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DISULFID
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Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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Pred. No. 0.03
0; Mismatches
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RESULT 8

TRFL MOUSE STANDARD; PRT; 707 AA.

ID TRFL MOUSE STANDARD; PRT; 707 AA.

AC P08071; P70690; Q61799; Q922P2;

DT 01.AUG-1988 (Rel. 08, Created)

DT 28-FEB-2003 (Rel. 41, Last sequence update)

DT 10-CCT-2003 (Rel. 42, Last annotation update)

DE Lactotransferrin precursor (Lactoferrin).

GN LTF.

OS Mus musculus (Mouse).

OC Eukaryota; Metazoa; Chordata; Craniata; Vertebra

OC Mammalia; Eutheria; Rodentia; Sciurognathi; Muri

OX NCBL_TaxID=10090;

RN [1]

RP SEQUENCE FROM N.A.

RC TISSUE-Uterus;

RX MEDLINE=87280033; PubMed=3611056;

RA Pentecost B.T., Teng C.T.;

RA Pentecost B.T., Teng C.T.;
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IRON 2 (BY SIMILARITY).
IRON 2 (BY SIMILARITY).
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CARBONATE 1 (VIA AMIDE NITROGEN) (15 SIMILARITY).
CARBONATE 2 (BY SIMILARITY).
CARBONATE 2 (VIA AMIDE NITROGEN) (15 SIMILARITY).
N-LINKED (GLCNAC. . .) (POTENTIAL)
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Pred. No. 0.046;
0; Mismatches
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Sciurognathi; Muridae; Murinae; Mus
inducible protein of
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RX MEDITNE-22380257; PubMed=12477932;

A Strausberg R.L., Feingold E.A., Shenmen C.M., Schuler G.D.,

RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,

RA Diatchenko L., Marusina K., Frarmer A.A., Rubin G.M., Hong L.,

Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,

RA Brownstein M.J., Wagners G.J., Abramson R.D., Mullahy S.J.,

Bosak S.A., McZwan P.J., McKernan K.J., Malek J.A., Gunarathe P.H.,

RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,

Villalon D.K., Nuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Villalon D.K., Nuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Villalon D.K., Nuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Villalon D.K., Nuzny D.M., Sodergren B.J., Lu X., Gibbs R.A.,

Rahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,

RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,

Blakesley R.W., Touchman J.W., Green E.D., Dickson M.C.,

RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,

"Generation and initial analysis of more than 15,000 full-length

human and mouse cDNA sequences.",

"Generation and initial analysis of more than 15,000 full-length

human sequences.",

Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                       PRINTS; PRO0422; TRANSFERKIN.

SMART; SM00094; TR FER; 2.

SMART; SM00094; TR FER; 2.

PROSITE; PS00206; TRANSFERRIN_2; 2.

PROSITE; PS00206; TRANSFERRIN_3; 2.

PROSITE; PS00207; TRANSFERRIN_3; 2.

PROSITE: Tron transport; Glycoprotein; Metal-binding; Repeat;
                                                                            Signal
SIGNAL
CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Characterization of estrogen-responsive mouse lactoferrin promoter.";
J. Biol. Chem. 266:21880-21885(1991).
-I- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING OF AN ANION, USUALLY BICARBONATE.
-I- SUBUBLIT: MONORMET.
-I- SUBUBLITI: MONORMET.
-I- SUBCLIDULAR LOCATION: Secreted.
-I- DOMAIN: Composed of two homologous domains.
-I- SUMILARITY: Belongs to the transferrin family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (S or send an email to license@isb-sib.ch).
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InterPro; IPR001156; Transferrin.
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L; D88510; BAA13533.1; -.
L; B8C006904; AAA06904.1; -.
L; M74778; AAA39427.1; -.
P; P02788; 1CB6.
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. Chem. 262:10134-10139(1987).
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Wuebbens M.W., Roush E.D., Decastro C.M., Fierke "Cloning, sequencing, and recombinant expression inhibitor of carbonic anhydrase: a novel member of the companion of the compan
                                         SEQUENCE FROM N.A., AND PARTIAL S
MEDLINE=97254619; PubMed=9100029;
                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9823;
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Sus scrofa (Pig).
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9; Conserv
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CARBONATE 1 (BY SIMILARITY).

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Pred. No. 0.07
1; Mismatches
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Best Local
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P02789;
21-JUL-1986
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SMART; SM00094; TR
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Biochemistry 31:12536-12542(1992).
-!- FUNCTION: Specifically binds and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochemistry 36:4327-4336(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 1.
PROSITE; PS00207; TRANSFERRIN 3; 2.
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01-FEB-1996 (Rel. 33, Last sequence update)
10-CCT-2003 (Rel. 42, Last annotation updat
Ovotransferrin precursor (Conalbumin) (Alle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CHICK
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                                                                                                                        "The
                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=82138851; PubMed=7060577;
Jeltsch J.-M., Chambon P.;
                                                                                                                                                                                                                                                                                                                                                                       (Serum transferrin).
Gallus gallus (Chicken).
Eukaryota; Metazoa; Chor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CARBOHYD
   SEQUENCE
                                                                                                                                                                                                                                                                                                                                          Archosauria;
                                                                                                                                                                                                                                                                        NCBI_TaxID=9031;
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TISSUB SPECIFICITY: Plasma.
PTM: N-glycosylated.
SIMILARITY: Belongs to the transferrin family.
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PF00405; transferrin; 2.
'S; PR00422; TRANSFERRIN.
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Weognathae; Galliformes; Phasiani
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INHIBITOR OF CARBONIC ANHYDRASE.
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Williams J., Elleman T.C., Kingston I.B., Wilki "The primary structure of hen ovotransferrin."; Eur. J. Biochem. 122:297-303(1982).
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MEDLINE=78171533; PubMed=649604;
Thibodeau S.N., Lee D.C., Palmiter R.D.;
"Identical precursors for serum transferrin
conalbumin.";
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Jeltsch J.-M., Hen R., Maroteaux L., Garnier 
"Sequence of the chicken ovotransferrin gene. 
Mucleic Acids Res. 15:7643-7645(1987).
                                                                                                                                                                                                                                 X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF 24-351.
MEDLINE=94032327; PubMed=8218271;
Dewan J.C., Mikami B., Hirose M., Sacchettini J.C.;
"Structural evidence for a pH-sensitive dilysine trigger ovotransferrin N-lobe: implications for transferrin iron Biochemistry 32:11963-11968 (1993).
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MEDLINE=80068893; PubMed=574451;
Dorland L., Haverkamp J., Vliegenthart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Iron transport and storage.";
Eur. J. Biochem. 164:485-506(1987)
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                                                                                                                            MEDLINE=96083822; PubMed=7490743
Kurokawa H., Mikami B., Hirose M
"Crystal structure of diferric h
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Investigation by 360-MHz 1H-nuclear-magnetic-resonance and methylation analysis of the single glycan chain of
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                    X-RAY CRYSTALLOGRAPHY MEDLINE=99428516; Pubr
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amino acid sequences of cysteic acid-containing ormic acid-oxidized ovotransferrin.";
hem. J. 116:515-532(1970).
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Liams J.;
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APHY (3.0 ANGSTROMS).
PubMed=10497206;
n J.C., Mikami B., Sa
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"Crystal structure of hen apo-ovotransferrin. Both lobes adopt an open of conformation upon loss of ixon.",
L. J. Biol. Chem. 274:28445-28452(1999).

C. --- FUNCTION: Transferrins are iron binding transport proteins which combined two atoms of ferric iron in association with the binding can bind two atoms of ferric iron in association with the binding of an anion, usually bicarbonate. It is responsible for the binding conformation, usually bicarbonate. It is responsible for the binding conformation of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation. ITS CONCENTRATION IN AVIAN EGG IS THE HIGHEST CONCENTRATION OF ANY CONCENTRATION IN AVIAN EGG IS THE HIGHEST CONCENTRATION OF TRANSFERRIN IN UTIVE THE SEGULATED BY THE IRON LIVER AND OVIDUCT) DIFFER ONLY BY THEIR CARBOHYDRATE COMPOSITION.
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PDB; 1OVT; 15-SPE-95.
PDB; LAIV; 29-APR-98.
PDB; 11EJ; 25-DEC-02.
PDB; 11UJ; 19-SPE-01.
PDB; 1VIJ; 19-SPC-99.
PDB; 1TFA; 29-DEC-99.

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DOMAIN
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Pfam; PF00405; transferrin; 2.

Pfam; PF00405; transferrin.

PRINTS; PR00402; TRANSFERRIN.

SMART; SM00094; TR FER; 2.

PROSITE; PS002005; TRANSFERRIN 1; 2.

PROSITE; PS002006; TRANSFERRIN 2; 2.

PROSITE; PS002007; TRANSFERRIN 3; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                               DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SUBUNIT: Monomer
SUBCELLULAR LOCATION: Secreted.
DOWALIN: Composed of two homologous domains.
ALLERGEN: Causes an allergic reaction in human.
SIMILARITY: Belongs to the transferrin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; X02009; CAA26040.1; -.; Y00407; CAA68468.1; -. A26845; TFCHE.
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RESULT 11
TRFE_ANAPL
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Matches 7
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P56410;
15-JUL-1998
15-JUL-1998
10-OCT-2003
lobes are in the open form.";
Acta Crystallogr. D 53:464-468 (1997).
-!- FUNCTION: Transferrins are iron binding transport proteins which can bind two atoms of ferric iron in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation. ITS
                                                                                                                                                                                                                            RAWAS A., Multhead H., Williams J.;
Rawas A., Multhead H., Williams J.;
"Structure of diferric duck ovotransferrin
Acta Crystallogr. D 52:631-640(1996).
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"Structure of apo duck ovotransferrin: the structures of the N
                                                                                                                                                                                                                                                                                                                     Archosauria; Ave
NCBI_TaxID=8839;
                                                                                                                                                                                                                                                                                                                                    Anas platyrhynchos (Domestic duck).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Aves; Neognathae; Anseriformes; Anatidae; Anas.
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(Rel. 36, Last sequence up
(Rel. 42, Last annotation
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Pred. No. 3;
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C: -- DOMAIN: Composed of two homologous domains.
C: -- SIMILARITY: Belongs to the transferrin family.
PDB; 1AOV; 16-JUN-97.
RPDB; 1DOT; 08-MAR-96.
RPDB; 1GVB; 03-MAY-02.
RPDB; 1GVC; 03-MAY-02.
RPDB; 1GVC; 03-MAY-02.
RPDB; 1GVC; 1FR001156; Transferrin.
RPDB; 1GVC; 1FR001156; Transferrin.
RPDB; 1GVC; TRANSFERRIN.
RPINTS; PR00405; transferrin.
RPINTS; PR00405; TRANSFERRIN 1; 2.
RPINTS; PR00094; TR FER; 2.
RPINTS; PR000206; TRANSFERRIN 2; 2.
RPROSITE; PS00206; TRANSFERRIN 2; 2.
RPROSITE; PS00206; TRANSFERRIN 3; 1.
RPROSITE; PS00207; TRANSFERRIN 3; 1.
RPROSITE; PS00207; TRANSFERRIN 3; 1.
RPROSITE; PS00207; TRANSFERRIN 3; 1.
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REPEAT
DOMAIN
33
DISULFID DIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Secreted.
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N-LINKED (GLCNAC. . .)
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                     Conservative
                                                       AA;
                                                      61.5%; Score 40; DB 1; 54.5%; Pred. No. 10;
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                                                         963FCF4727C3EBDD CRC64;
                       Mismatches
                                        Length 686;
                        Indels
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                         Gaps
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341

RENKIQWCAVG

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RESULT 12
REP2_E
                                                                                                          PLASMID=IncFII R100;

MEDLINB=86319522; PubMed=3019092;

Ohtsubo H., Ryder T.B., Maeda Y., Armstrong K., Ohtsubo E.;

UNA replication of the resistance plasmid R100 and its control.";

Adv. Biophys. 21:115-133(1986).

-i-FUNCTION: This protein is essential for plasmid replication; it involved in copy control functions.

-i-SIMILARITY: BELONGS TO THE INCFII REPA FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                               Womble D.D., Sampathkumar P., Easton A.M., "Transcription of the replication control; R-plasmid NRI in vitro and in vivo.", J. Mol. Biol. 181:395-410(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLASMID=IncFII NR1;
MEDLINE=89011975; PubMed=3050127;
Dong X., Womble D.D., Rownd R.H.;
"In-vivo studies on the cis-acting replication initiator protein of IncFII plasmid NR1.";
                                         between
                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
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MEDLINE=81074309; PubMed=7003300;
MEDLINE=817-1, Inokuchi H., Ohtsubo H., Ohtsubo E.;
Rosen J., Ryder T., Inokuchi H., Ohtsubo H., Ohtsubo E.;
"Genes and sites involved in replication and incompatibility of an R100 plasmid derivative based on nucleotide sequence analysis.";
nol. Gen. Genet. 179:527-537(1980).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=85160860; PubMed=2580099;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLASMID=IncFII NR1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "RepA protein and oriR-dependent initiation of R1 plasmid replication: identification of a rho-dependent transcription terminator required for cis-action of repA protein."; Nucleic Acids Res. 16:6493-6514(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PLASMID=IncFII R100, and IncFII R1;

MEDLINE=81173118; PubMede=6163994;

Rosen J., Ryder T., Ohtsubo H., Ohtsubo E.;

"Role of RNA transcripts in replication incompatibility and copy number control in antibiotic resistance plasmid derivatives.";

Nature 290:794-797(1981).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 270-285 FROM N.A. PLASMID=IncFII R1;
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Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
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Plasmid IncFII R
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21-JUL-1986 (Rel. 01,
21-JUL-1986 (Rel. 01,
30-MAY-2000 (Rel. 39,
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CSX2_SCHP
RX STRAIN-972;

RX MEDLINE=21848401; PubMed=11859360;

RX MEDLINE=21848401; PubMed=11859360;

RA MOOD V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A.,

RA Mood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A.,

RA Sgourss J., Peat N., Hayles J., Baker S., Basham D., Bowman S.,

RA Sgourss J., Peat N., Hayles J., Baker S., Hallingworth T., Churcher C.M.,

RA Sgourss J., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G.,

RA Gentles S., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Hunt D., Odell C.,

RA Holroyd S., Hornsby T., Howarth S., Huckle E.J., Whitehead S.,

RA Woodward J., Volckaert G., Saunders D., Seeger K., Sharp S.,

RA Woltyers I., Jones M., Squares R., Squares S., Stevens K.,

RA Weltjens I., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S.,

RA Weltjens I., Jones R., Lehrach H., Reinhardt R., Pohl T.M.,

RA Borzym K., Cadieu E., Dreano S., Gloux S., Lelaure V., Mottier S.,

RA Gallbert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S.M.,

RA Gallert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S.M.,

RA Locas M., Rochet M., Gaillardin C., Tallada V.A., Garzon A., Thode G.,

RA Dominguez A., Revuelta J.L., Moreno S., Armstrong J., Forsburg S.L.,

RA Cerrutti L., Lowe T., McCombie W.R., Paulsen I., Potashkin J.,

"The genome sequence of Schlzosaccharomyces pombe.";

RT ""The genome sequence of Schlzosaccharomyces pombe.";
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16-OCT-2001
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Eukaryota, Fungi, Ascomycota, Schizosaccharomycetes,
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CONFLICT
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EMBL;
EMBL;
PIR; ;
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10-OCT-2003 (Rel.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BL; J01762; AAA92257.1; -.
BL; J01770; -; NOT ANNOTATED CDS.
BL; X12587; CAA31100.1; -.
BL; X12576; CAA31263.1; -.
BL; X02302; CAA26168.1; -.
BL; X02302; CAA26169.1; ALT_INIT.
BL; X02302; CAA26067.1; -.
R; A03602; IDECRP.
R; 164780; 164780.
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PR02387; IncFII repA; 1.
id; DNA replication; Plasmid copy control.
id; DNA replication; Plasmid copy control.
ICT 55 R -> H (IN REF. 6).
RCE 285 AA; 32755 MW; A21C9D59D24B26BB CRC64;
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(Rel. 40,
(Rel. 42,
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Pred. No. 6.8;
1; Mismatches
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Best Local S
Matches 6
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InterPro; IRR001164; hRIP like.
InterPro; IRR0011649; PH.
Pfam; PF01412; hrfGap; 1.
Pfam; PF00169; PH; 1.
PRINTS; PR00405; REVINTRACTNG.
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SEQUENCE
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30-MAY-2000
30-MAY-2000
16-OCT-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Hirata A., Yanagida M.;
Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases
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PROSITE; PS50003; PH_DOMAIN; 1.
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crenarchaeon, Aeropyrum pernix Kl.";
DNA Res. 6:83-101(1999).
-!- SIMILARITY: Belongs to the UPF00
                                                                MEDLINE=99310339; PubMed=10382966;
Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Kawarabayasi Y., Hino Y., Horikawa H., Rosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takaniya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hypothetical
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                                                                                                                                                                                                                                                                                                                                                              Desulfurococcaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                  Aeropyrum pernix.
                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=56636;
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T39731; T39731
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(Rel. 40, Last annotation update)
l protein APE1792.
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614 PH.
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710 C4-
716 NGC
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i K., Nabeshima K., Yamashita Y., Nakaseko
                                                                                                                                                                                                                                                                                                                                                                 Aeropyrum
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75.0%;
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Pred. No. 30;
1; Mismatches
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C4-TYPE.
NGGSPIYLC -> VVQFVLNMQ (IN REF.
4B3ED6F6162E80C6 CRC64;
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RR McDowell K.J., Adams M.H., Baker C.B.;
RA McDowell K.J., Adams M.H., Baker C.B.;
RA McDowell K.J., Adams M.H., Baker C.B.;
RA McDowell K.J., Adams M.H., Baker C.B.;
RL Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases.
RL Submitted (MAR-1995) to the Embly databases.
RL Submitted (MAR-1995) to the Example of transport proteins which composed of two homologous domains.
RL Submitted (MAR-1995) to the transferrin family.
RA McDowell K.J., Adams M.H., Baker C.B.;
RA McDowell K.J., Adams M.H., Adams
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01-AUG-1992 (Rel. 23, Created)
01-AUG-1992 (Rel. 23, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Serotransferrin precursor (Transferrin) (Siderophilin)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Carpenter M.A., Broad T.E.; "The cDNA sequence of horse transferrin."; Biochim. Biophys. Acta 1173:230-232(1993).
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Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
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EMBL; M69020; AAA30958.1; -.
EMBL; U21127; AAA63684.1; -.
PIR; S33761; S33761.
                                                                                                   use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch)
                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collar between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
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Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1; 2.
PROSITE; PS00205; TRANSFERRIN_2; 2.
PROSITE; PS00205; TRANSFERRIN_3; 2.
Transport; Iron transport; Glycoprotein; Metal-binding; Repeat;
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Query Match 100.0%; Score 65; DB 4; Length Best Local Similarity 100.0%; Pred. No. 0.0049;	SEQUENCE 711 AA; 78327 MW; 1B9C7EE097C45F	Glycoprotein; Iron transport; Metal-binding; Tra	PROSITE; PS002	PROSITE; PS001	PROSITE; PS001	SMART; SM00094	PRINTS; PR00422;		InterPro; IPR001	GO; GO:0006810;	GO; GO:0006826;	GO; GO:0006879; P:iron ion homeostasis	GO; GO:0008199; F:ferric iron binding; 1	GO; GO:0005576;	EMBL; BC022347; AAH22347.1;		OF AN ANION, USUALL		-!- FUNCTION: TRA	Subr	Strausberg R.;			RN [1]	NCBI TaxI	Mammalia; Eutheria; Primates;	Rukarvota: Metazoa; Chordata; Craniata; Vertebrata;	Homo sapiens (Human).	Lactotransfe	01-OCT-2003 (TrEMBLrel. 25, Last	01-JUN-2002 (Tramblical, 21,	O1 - TIM-2002 (Tremsire)		!	11273
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Matches

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Kaplan J.B., Fine D.H.;

"Characterization of an amino acid polymorphism in the antibacterial domain of human lactoferrin.",
submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

EMBL; AY137470; AAN11304.1; ...
GO; GO:0008576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0008199; P:iron ion homeostasis; IEA.
GO; GO:0008879; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
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01-MAR-2003
01-MAR-2003
           TISSUE=Seminal vesicle;
Baskar Singh S., Sarava
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Mammalia; Eutheria;
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01-MAR-2003 (TrEMBLrel. 23,
01-OCT-2003 (TrEMBLrel. 25,
Lactotransferrin precursor (
                                                                SEQUENCE FROM N.A.
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Shi Y.-Q., Zhang Y., Zheng
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
SEQUENCE 711 AA; 78396 MW; 547A
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Mammalia; Eutheria;
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Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                Gene: cDNA Cloning and Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                   Paramasivam
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                Ξ.
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Q8WMN8
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                                                                                                                                                                                                                                                                                        RE SEQUENCE FROM N.A.

RI TISSUE=Mammary gland;

RA Hang S.-R., Lin T.-Y., Weng C.-N.;

RA Wang S.-R., Lin T.-Y., Weng C.-N.;

RI "Isolation and expression of porcine milk lactoferrin.";

RI "Isolation and expression of porcine milk lactoferrin.";

RI Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.

C. I FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CLO CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING CO CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING CO FAN ANION, USUALLY BICARBONATE (BY SIMILARITY).

C. I SIMILARITY: BELONGS TO THE TRANSFERRIN FAMILY.

C. GO:0005576; C:extracellular; IEA.

CO; GO:0005579; F:ferric iron binding; IEA.

CO; GO:0006879; P:iron ion transport; IEA.

CO; GO:0006879; P:transport; IEA.

CO; GO:0006810; P:transport; IEA.

CO; GO:0006810; P:transport; IEA.

CO; GO:0006810; F:transferrin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RI DR 
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Best Local S
Matches 12
           Best Local
Matches
                                                      Query Match
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Submitted (DEC-2002) to the EMBL/GenBank/DDB
EMBL; AX165046; AANG3998.1; -.
EMBL; AX178998; AAN75578.2; -.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0006879; P:iron ion homeostasis; IEA.
GO; GO:0006879; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
                                                                                                                    Pfam; PF00405; transferin; 2.

PRINTS; PR00422; TRANSFERRIN.

SMART; SM00094; TR FER; 2.

PROSITE; PS00205; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 2; 2.

PROSITE; PS00207; TRANSFERRIN 3; 1.

Glycoprotein; Iron transport; Metal-binding; Transport.

NON TER 1
                                                                                                   SEQUENCE
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SIGNAL
CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
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01-OCT-2003
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01-MAR-2002
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           10;
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                                 Similarity
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           Conservative
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711
78382 <sub>1</sub>
                                                                                                 77681 MW;
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                              89.2%;
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       Score 58; DB
Pred. No. 0.07
2; Mismatches
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Last annotation updat
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547BFC42C9267E67 CRC64;
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Pred. No. 0.0049;
                                                                                                 64EE769F7503CC32
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                              DB 6;
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Query Match Best Local S Matches 12

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Matches 10
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Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                    EMBL; AY036583; AAK66816.1; JOINED.
EMBL; AY036581; AAK66816.1; JOINED.
GO: GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0006879; P:iron ion homeostasis; IEA.
GO; GO:0006876; P:iron ion transport; IEA.
InterPro; IPRO01156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
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Q7YS20;
01-0CT-2003
01-0CT-2003
01-0CT-2003
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TISSUE=Mamary gland;
Pecorini C., Fogher C., Baldi A.;
Pecorini C., Fogher C., Baldi A.;
"The nucleotide sequence of porcine lactoferrin cDNA.";
"The nucleotide sequence of porcine lactoferrin cDNA.";
Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases
SUBBL; AY306198; AAP70487.1; -.

AAP306198; AAP70487.1; -.

AAC8E1767E56BF6A CRC64;
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01-DEC-2001
01-OCT-2003
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                        NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 1-40 FROM N.A.

Li G., Zhang Y., Li N.,

"Analysis of the 5'-region of the bovine lactoferrin gene
SSCP.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea
Bovidae; Bovinae; Bos.
NCBI_TaxID=9913;
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01-DEC-2001 (TrEMBLrel. 19,
01-OCT-2003 (TrEMBLrel. 25,
Lactoferrin (Fragment).
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112 AA;
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nilarity 83.3%;
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2; Mismatches
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Pred. No. 0
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                                      Mismatches
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Q8CBA0
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SEQUENCE FROM N.A.
MEDLINE=91100550; PubMed=2001696;
Pierce A., Colavizza D., Benaissa M., Maes P.,
Montreuil J., Spik G.;
Montreuil J., Spik G.;
"Molecular cloning and sequence analysis of bo
"Molecular cloning and sequence analysis of bo
"Molecular cloning and sequence analysis of bo
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Q8CBA0;
01-MAR-2003;
01-MAR-2003;
01-OCT-2003;
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GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding;
GO; GO:0006879; P:iron ion homeostasis;
GO; GO:0006826; P:iron ion transport;
InterPro; IPR001156; Transferrin.
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01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation updat
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SMART; SM00094; TR_FER;
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STRAIN=C57BL/6J; TISSUE=Bone;
MEDLINE=22354683; PubMed=12466851;
                                                                                                                                                                                                                                                 NCBI_TaxID=10090;
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                                         EMBL;
                                                              The FANTOM Consortium, the RIKEN Genome Exploration Research Group Phase I & II the RIKEN Genome Exploration Research Group Phase I & II "Analysis of the mouse transcriptome based on functional 60,770 full-length cDNAs.";
Nature 420:563-573(2002).
                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse)
  90;
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L; AK036491; BAC29450.1; -.; MGI:96837; Ltf.
GO:0005576; C:extracellular;
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2; TRANSFERRIN.
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Rodentia;
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GO; GO:0006879; P:iron ion homeostasis; IE
GO; GO:0006826; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN 2.
PRINTS; PR00427; TRANSFERRIN 1; 1.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
                                             082HU3;
01-JUN-2003 (TrEMBLrel. 24, Created
01-JUN-2003 (TrEMBLrel. 24, Last se
01-OCT-2003 (TrEMBLrel. 25, Last an
Putative short-chain dehydrogenase.
 Streptomyces avermitilis.
Bacteria; Actinobacteria;
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                                                                                                                                                                                                                                                                                                                                                                                  "A physical map of the Leishmania major Friedlin Genome Res. 8:135-145(1998).
EMBL; AL365154; CAB96741.1; -.
EO; GO:0005759; C:mitochondrial matrix; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=Friedlin;
MEDLINE=98146435; PubMed=9477341;
Ivens A.C., Lewis S.M., Bagherzad
Smith D.F.;
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                                     SAV3415.
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01-OCT-2000 (TrEMBLrel. 15,
01-OCT-2003 (TrEMBLrel. 25,
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Eukaryota; Euglenozoa;
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 Actinobacteridae;
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Pred. No. 0.87
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Actinomycetales;
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Q8KWB8;
01-OCT-2002
01-OCT-2002
01-JUN-2003
                                                                                                                                           SEQUENCE
                                                                                                                                                                        GO; GO:0046821;
                                                                                                                                                                                                                                                                                                                                                                 Ruegeria sp. 1
Plasmid pSD20
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Zhong Z., Toukdarian A., Helinski D.R.;
"Characterization of two huge plasmids bearing
Ruegeria PR1b and sequence analysis.";
Submitted (AUG-2001) to the EMBL/GenBank/DDBJ c
EMBL, AF416330; AANO5145.1;
                                                                                                                                                                                                                                                                                                                                                     Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nat. Biotechnol. 21:526-531(2003).

EMBL; AP005035; BAC71127.1; --.

GO; GO:0016491; F:oxidoreductase a

GO; GO:0008152; P:metabolism; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Complete genome sequence and comparative microorganism Streptomyces avermitilis."; Nat. Biotechnol. 21:526-531(2003).
                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                Rhodobacteraceae;
NCBI_TaxID=185588;
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MEDLINB-21477403; PubMed=11572948;
Omura S., Ikeda H., Ishikawa J., Hanamoto A., Takahashi C.,
Shinose M., Takahashi Y., Horikawa H., Nakazawa H., Osonoe T.
Kikuchi H., Shiba T., Sakaki Y., Hattori M.;
"Genome sequence of an industrial microorganism Streptomyces avermitilis; deducing the ability of producing secondary metabolites.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAINEMA-4680 / ATCC 31267 / NCIM
MEDLINE=22608306; PubMed=12692562;
Ikeda H., Ishikawa J., Hanamoto A.
Sakaki Y., Hattori M., Omura S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Streptomycineae; Streptomycetaceae; Streptomyces NCBI_TaxID=33903;
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                                                                Similarity
7; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 80.08; Conservative
QRAHVVWCVWG
                                RRARVVWCAVG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ARRARTVWLA
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                                                                                                                                 345 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           254 AA;
                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                     PR1b
                                                                                                                                                                 C:extrachromosomal
                                                                                                                                                                                                                                                                                                                                     Ruegeria
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                                                                                                                                 38653 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26802 MW;
                                                                                63.1%;
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                                                                                                                                                                                                                                                                                                                                                   Alphaproteobacteria; Rhodobacterales;
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Last seq
Last ann
                                                                                Score 41;
Pred. No.
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Pred. No. 28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
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                                                                                                                                AC9749D8E4FFDASE
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                                                                Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                  sequence update)
annotation update)
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                                                                                            Length 345
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RC STRAIN=CS7BL/61; TISSUE=Liver;

RX MEDILINE=21085660; PubMed=11217851;

RX MEDILINE=21085660; PubMed=11217851;

RA Arakawa T., Hara A., Fukunishi Y., Komno H., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Komno H., Adachi J., Fukuda S.,

RA Arakawa T., Hara A., Fukunishi Y., Kondo S., Yamanaka I.,

RA Arakawa T., Hara A., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,

RA Arakawa T., Hara A., Pikunishi Y., Kondo S., Yamanaka I.,

RA Alzawa K., Jawa M., Nishi K., Kiyosawa H., Kasukawa T., Saito R.,

RA Alzawa K., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

RA Alzawa K., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito R.,

RA Alzawa K., Okazaki Y., Saito T., Comita M., Wagner L., Washio T.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J.,

RA Kuehl P., Lewis S., Matsuo Y., Nikaido I., Washio T.,

RA Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Genello M.F.,

RA Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,

RA Lyons P., Marchionni L., Mashima J., Mazarelli J., Mombaerts P.,

RA Brownstein M., Schoenbach C., Seya T., Sahbata Y., Scorch K.-F.,

RA Brownstein M., Schoenbach C., Seya T., Sahbata Y., Scorch K.-F.,

RA Brownstein M., Schoenbach C., Seya T., Sahbata Y., Scorch K.-F.,

RA Havashizaki Y.,
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Matches 7
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Xu C.S., Li W.Q., Li Y.C., Han H.P., Wang G.P., Chai L.Q.

Xu C.S., Yan H.M., Chang C.F., Zhao L.F., Ma H., Wang Yang K.J., Yan H.M., Chang C.F., Zhang J.B.;

Shi J.B., Rahman S., Wang Q.N., Zhang J.B.;

"Liver regeneration after H.";

"Liver regeneration after H.";

"Liver regeneration after H.";

"Liver regeneration after H.";

SEQUENCE 421 AA; 46104 MW; F7FA084ABD73583A CRC64;
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Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JUN-2001 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
01-OCT-2003 (TrEMBLrel.
1300017JUZRik protein.
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Mammalia; Eutheria;
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EMBL; AK005035; BAB23762.1; -. HSSP; P19134; ITFD. MGD; MGI:1919025; 1300017J02Rik. GO; GO:0005576; C:extracellular;
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                                                                                                                              "Functional annotation of a full-length mouse cDNA collection.", Nature 409:685-690(2001).
                                                                                                                                                                                           Hayashizaki Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CBI_TaxID=10090;
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Rodentia;
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Last sequence update)
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Sciurognathi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
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thi; Muridae; Murinae; Rat
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056754; 056754; 01-JUN-1998 01-JUN-1998 01-OCT-2003

PRELIMINARY;

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(TrEMBLrel. 06, Creat (TrEMBLrel. 06, Last (TrEMBLrel. 25, Last ral protein 5 (Genome

sequence update) annotation update) polyprotein) (Frag

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Hepacivirus. Hepatitis C virus Viruses; ssRNA po Non-structural protein

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RESULT
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MGD; MGI:5191025; 130001702raik.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0006879; P:iron ion homeostasis; IEG.
GO; GO:0006876; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
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Q8VC96;
01-MAR-2002
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1; 1.
PROSITE; PS00207; TRANSFERRIN_3; 1.
SEQUENCE 700 AA; 76765 MW; 38C991D1021AE548
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1300017J02RIK.
Mus musculus (Mouse)
Mus musculus (Motazoa; Chordata;
Metazoa; Rodentia;
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1; 1.
PROSITE; PS00207; TRANSFERRIN_3; 1.
SEQUENCE 700 AA; 76795 MW; 7DA4A580CBB6BF37 CRC64;
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Pfam; PF00405; transferrin;
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RC STRAIN=HC-P43;
RX MEDLINE-98156956; PubMed=9497224;
RX MEDLINE-98156956
PUBMED-10003696; PubMed=9497224;
RX MEDLINE-98156956
PUBMED-10003504; RNA-directed RNA polymerase activity; IEA.
DR GO; GO:0003502; Pitransferase activity; IEA.
DR GO; GO:0003502; Pitransferase activity; IEA.
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ALIGNMENTS

RESULT 1
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ID AAW9 XAXFFXBXWWWX8XXEXEXEXEXEXEXFXXXXX8X8288888 bacteria; fungi; yeast; protozoa; virus; mycoplasma; filaria; plasmodia; infection; inflammation; microbial induced tumour; degenerative disorder; diarrhoea; colic; oral microflora; intestinal microflora; caries; Bifidogenic peptide; protease; treatment; microbe-related disease, Bifidobacterium bifidus stimulating peptide 16. 27-AUG-2003 25-JUN-1999 AAW93880; AAW93880 standard; peptide; 13 AA WO9914231-A2. Bifidobacterium vaginal microflora. 25-MAR-1999. 16-SEP-1998; (revised) (first entry) 98WO-EP005899. bifidum.

16-SEP-1997; 11-FEB-1998; (FORS/) FORSSMANN W. 97DE-01040604. 98DE-01005385.

Milk-derived peptides that stimulate Bifidobacterium WPI; 1999-244022/20.

bifidus.

Forssmann W,

Zucht H,

Liepke Ç

Claim 2; Page 3; 25pp; German.

This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bovine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing Bifidobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-B0)-(Ew-E0) is at least 0.15 are

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AAW71180-83 represent N-terminally truncated human lactoferrin proteins. The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion. note: this sequence does not appear in the specification; it was created uing information provided
                                                                                                                                                                                            Claim
                                                                                                                                                                                                                           Compositions containing human lactoferrin and variants - are used for treating e.g. anaemia, iron-storage disease, inflammation, tumours, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                     03-FEB-1997;
02-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; lactoferrin protein; variant; anti-inflammatory; anti-viral; anti-infective; coagulant; complement activation; inhibition; LPS mediated activation; myelopoiesis; growth promotion; intestinal epithelial cell; hydroxyl-radical formation; intestinal iron uptake; excretion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    selected where Bw = germ count after 16 hr culture of B. bifidus in 50% Elliker broth containing peptide at 0.2 mg/ml, B0 = germ count under similar conditions in a peptide-free control, Ew = germ count after 16 hr culture of E. coli in 3 g/l tryptic broth containing peptide at 0.2 mg/ml, E0 = germ count under similar conditions in a peptide-free control. The peptides AAW93865-W93888 are used to treat microbe-related diseases caused by bacteria, fungi, yeast, protozoa, viruses, mycoplasma, filaria and plasmodia, e.g. infections, inflammation, microbially induced tumours or degenerative disorders, diarrhoea, colic, abnormalities in oral, intestinal or vaginal microflora, or caries. (Updated on 27-AUG-2003 to correct OS field.)
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                                                                                                                                                                                                                                                                                                                                  Nuijens J,
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Matches 13
                   The sequence represents the human lactoferrin (hLF) protein variant hLF-SN. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence given in the sequence listing of the specification
Sequence
                                                                                                                                                                                                                          Use of lactoferrin for treatment diseases and excess of heparin.
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27-MAR-2000; 2000US-0193352P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hLF-5N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22-JAN-2002
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                                                                                                                                                                                                                                                                   2001-648424/74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               336
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13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mutant; mutein.
  687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARRARVVWCAVGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              standard; protein;
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ilarity 100.0%;
Conservative (
 AA;
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                                                                                                                                                                                                  English
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hLF-5N
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                                                                                                                                                                                                                                                                                                                      PROPERTY BV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 70; DB 2; 1
Pred. No. 0.00073;
; Mismatches 0;
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                                                                                                                                                                                                                                        e
E
                                                                                                                                                                                                                                        infectious diseases, inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 687;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           proteoglycan;
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1 ARRARVVWCAVGE 13

Query Match Best Local S Matches 13

l Similarity
13; Conserv

Conservative

0;

Score 70; DE Pred. No. 0.0 0; Mismatches

DB 4; 0.00073;

Length 687

<u>,</u>

Gaps

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100.0%;

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336

ARRARVVWCAVGE

348

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ARBSULT 4
ARAWIT 18
AC AAW7
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RESULT 5
AAG77910
ID AAG7
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AC 22-J
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Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW71180-83 represent N-terminally truncated human lactoferrin proteins. The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excrection, note: this sequence does not appear in the specification; it was created uing information provided
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti-infective; coagulant; complement activation; inhibition; LPS mediated activation; myelopolesis; growth promotion; intestinal epithelial cell; hydroxyl-radical formation; intestinal iron uptake; excretion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW71182 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Compositions containing human lactoferrin and variants - are used for treating e.g. anaemia, iron-storage disease, inflammation, tumours, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mutant human lactoferrin
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02-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO9833509-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nuijens J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (PHAR-) PHARMING BV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-FEB-1998;
     22-JAN-2002
                                                        AAG77910;
                                                                                                           AAG77910
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                                                                                                                                                                                                                                                                                                                                                  l Similarity
13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           688
                                                                                                                                                                                                                                                                                            ARRARVVWCAVGE
                                                                                                           standard;
                                                                                                                                                                                                                                              ARRARVVWCAVGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Van Berkel PHC;
                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first
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A
     (first entry)
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98US-00017043
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                                                                                                         protein;
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                                                                                                                                                                                                                                                                                                                                                                        100.0%;
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                                                                                                                                                                                                                                                 349
                                                                                                                                                                                                                                                                                               13
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             688
                                                                                                              883
                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                  Score 70; DB
Pred. No. 0.0
); Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ã
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                                                                                                                                                                                                                                                                                                                                            , DB 2; LE.
, 0.00073;
                                                                                                                                                                                                                                                                                                                                                                                                        Length 688
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RESULT 6
AAW71181
ID AAW7
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Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                    The sequence represents the human lactoferrin (hLF) protein variant hLF-4N. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaema, myelopoises, reducing repertusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence given in the sequence listing of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; se; anaemia; myelopoiese; reperfusion injury; cytokine release; proteo hLF-4N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Use of lactoferrin for diseases and excess of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Van
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           27-MAR-2000;
27-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human lactoferrin variant
Human; lactoferrin protein; variant; anti-inflammatory; anti-
anti-infective; coagulant; complement activation; inhibition;
LPS mediated activation; myelopoiesis; growth promotion;
intestinal epithelial cell; hydroxyl-radical formation;
intestinal iron uptake; excretion.
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 10; Page; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-648424/74.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (PHAR-) PHARMING INTELLECTUAL
                                                                                      Mutant human
                                                                                                                   27-OCT-1998
                                                                                                                                             AAW71181;
                                                                                                                                                                         AAW71181 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bree
                                                                                                                                                                                                                                                  337 ARRARVVWCAVGE 349
                                                                                                                                                                                                                                                                                                      l Similarity
13; Conserv
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                                                                                                                                                                                                                                                                            ARRARVVWCAVGE
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                                                                                                                                                                                                                                                                                                                                                                688 AA;
                                                                                                                                                                                                                                                                                                      100.0%;
ilarity 100.0%;
Conservative (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000EP-00201110.
2000US-0193352P.
                                                                                      lactoferrin protein designated hLF-3N
                                                                                                                   (first entry)
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24. .27
/label= Cationic_don
                                                                                                                                                                          protein;
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                                                                                                                                                                             689
                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                         Score 70; DB 4;
Pred. No. 0.00073;
, Mismatches 0;
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                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of infectious diseases, inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В۷
                                                                                                                                                                                                                                                                                                                                   Length 688
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               proteoglycan;
                                                                                                                                                                                                                                                                                                           0;
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RESULT 7
AAG77909
ID AAG7
XX AAG7
XX AAG7
XX Huma
DE Huma
XX Homc
XX Exce
XW E
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Best Local :
                                                                                                                                                                                                    Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW71180-83 represent N-terminally truncated human lactoferrin proteins. The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopolesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion, note; this sequence does not appear
  27-MAR-2001; 2001WO-NL000253
                                                           04-CCT-2001
                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                             mutant;
                                                                                                                                                                                                                                                                                                                                                                                                                              Human;
                                                                                                                 WO200172322-A2
                                                                                                                                                                                                                                                                                                                                                                        anaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human lactoferrin variant hLF-3N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            22-JAN-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAG77909 standard; protein; 689 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 689
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 2; Page; 70pp; English
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02-FEB-1998;
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Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the specification; it was created uing information provided
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                338
                                                                                                                                                                                                                                                                                                                                       lactoferrin; hLF; infectious disease; inflammatory disease; of heparin; gastroenteritis; inflammatory bowel disease; sepsis; a; myelopoisee; resperfusion injury; cytokine release; proteoglycan; mutein; hLF-3N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Van Berkel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ã,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
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98US-00017043.
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                                                                                                                                                                Location/Qualifiers
25. .28
/label= Cationic_domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 70; DB 2;
Pred. No. 0.00073;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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AAW71
AAW71
AAW71
AAW72

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AAW71180
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Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The sequence represents the human lactoferrin (hir) protein variant hir-
3N. The invention relates to novel methods of treatment using high doses
of lactoferrin. The methods of the invention are useful for the treatment
or prophylaxis of infectious diseases, inflammatory diseases and excess
of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis,
anaemia, myelopoises, reducing reperfusion injury, cytokine release and
proteoglycan-mediated entry of virus into cells. The advantage of the
method is that the patient is substantially free of side effect responses
to administration of lactoferrin. Therefore large doses of lactoferrin
can be administered. Note: The present sequence is not shown in the
specification but is derived from human willattype lactoferrin sequence
                                  WPI; 1998-437164/37
                                                                                   Nuijens J,
                                                                                                                                                                                              03-FEB-1997;
02-FEB-1998;
                                                                                                                                                                                                                                                                               02-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                          WO9833509-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human; lactoferrin protein; variant; anti-inflammatory; anti-
anti-infective; coagulant; complement activation; inhibition;
LPS mediated activation; myelopoiesis; growth promotion;
intestinal epithelial cell; hydroxyl-radical formation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mutant human lactoferrin protein designated hLF-2N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW71180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW71180 standard; protein; 690 AA.
                                                                                                                                                                                                                                                                                                                                   06-AUG-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               intestinal
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        given in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Use of lactoferrin for treatment diseases and excess of heparin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-MAR-2000; 2000EP-00201110.
27-MAR-2000; 2000US-0193352P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       l Similarity
13; Conserv
                                                                                                                                             PHARMING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ARRARVVWCAVGE 350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   the sequence listing of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page; 49pp; English.
                                                                                   Van Berkel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                           97US-0036859P
98US-00017043
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                                                                                                                                             Вν
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                      PHC;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 70;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of infectious diseases, inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    . 0.00073;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 689;
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RRESULT 9
AAG(7)
XX AAG(7)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The lactoferrin variants bind heparin with lower affility than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-oagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion note: this sequence does not appear in the specification; it was created uing information provided
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Compositions containing human lactoferrin and variants - attreating e.g. anaemia, iron-storage disease, inflammation, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 690 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human; lactoferrin; hLF; infectious disease; inflammatory disease;
excess of heparin; gastroenteritis; inflammatory bowel disease; se
anaemia; myelopoiesis; reperfusion injury; cytokine release;
proteoglycan; hLF-2N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAW71180-83 represent N-terminally truncated human lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAG77908
The sequence represents the human lactoferrin (hLF) protein variant hLF-2N. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
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27-MAR-2000;
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                                                                                                                                                                                                                   Claim 10;
                                                                                                                                                                                                                                                                                                Use of lactoferrin f
diseases and excess
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  lactoferrin variant hLF-2N.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JBMM
                                                                                                                                                                                                                   Page; 49pp;
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2000US-0193352P
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26. .29
/label= Cationic_domain
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heparin.
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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J.00073;
O;
                                                                                                                                                                                                                                                                                                                                                diseases,
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                                                                                                                                                                                                                                                                                                                                                    inflammatory
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RESULT 10
ABG80724
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release an proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect respons to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 given in
                                                                                                                                                                                                                                                                                                           14-FEB-2001; 2001US-0269188P.
14-FEB-2001; 2001US-0269199P.
02-MAY-2001; 2001US-00847232.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29-NOV-2002
                                                                                                                                                                                       producing heterologous polypeptide in plant grain, by cultransformed plant to form a grain-producing transforming recovering transgenic grains containing polypeptide from
                                                                                                                                                                                                                                   WPI; 2002-657592/70.
N-PSDB; ABS66515.
                                                                                                                                                                                                                                                                                                                                                      14-FEB-2002; 2002WO-US004909
                                                                                                                                                                                                                                                                                                                                                                                               WO200264750-A2
                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                         seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Transformed plant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Codon
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                                                                                                                                                                                                                                                                  Huang
                                                                                                                                                                               plant.
                                                                                                                                                                                                                                                                                      (VENT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                         protein;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity
13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARRARVVWCAVGE 351
                                                                                                                                                           Page 117; 230pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry
                                                                                                                                                                                                                                                                                                                                                                                                                                         protein
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Pred. No.
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                                                                                                                                                                                            plant, and
transformed
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The invention describes a method of producing a heterologous polypeptide CC (I) in a grain of a plant, comprising culturing a transformed plant (P1) CC comprising a first chimeric gene, and optionally, at least one CC heterologous transcription factor that is capable of enhancing the CC expression of the chimeric gene, to form a grain producing transforming CC plant (P2), and recovering transgenic grains containing (I) from P2. The CC method is useful for producing heterologous polypeptide in a grain of a CC plant. (I) is a non-plant storage, human or non-human animal, milk or CC other than a milk polypeptide, antibodies, cytokines, lymphokines, CC chemokines, hormones, growth factors, coagulation factors, anti-CC infectives, or cytotoxins, or anti-inflammatory molecule or intestinal CC trefoil factor (ITP) or its active fragment. Preferably, (I) is CC lactoferrin, lysozyme, lactoferricin, ITP, epidermal growth factor (IGF-I), cc keratinocyte growth factor (KGF), insulin-like growth factor I (IGF-I),

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RESULT 11
AAE27884
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Best Local S
Matches 13
         The invention relates to improved feed for production animals, comprising one or more plant-derived feed ingredients, substantially unsupplemented with small-molecule antibiotics and as an additive a seed composition containing a flour, extract or malt obtained from mature monocot seeds and one or more heterologous seed-produced anti- microbial proteins in substantially unpurified form. The invention is useful as a feed for production animals such as poultry and hoofed farm animals. The present sequence is human codon optimised lactoferrin. This sequence is used in
                                                                                                                                                                                                                                                                        Improved feed for production animals, comprising plant-derived feed ingredients, and seed composition containing flour, extract, or malt mature monocot seeds and heterologous seed-produced anti-microbial
                                                                                                                                                                                                             Example 7; Page 148-150; 175pp; English.
                                                                                                                                                                                                                                                                                                                                                                                              WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                   Huang N,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-FEB-2001;
02-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14-FEB-2002; 2002WO-US004919
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    numan; feed improvement;
anti-microbial; poultry;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (VENT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-AUG-2002
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invention
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2001US-00847232
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                                                                                                                                                                                                                                                                                                                                                                                                                                Hagie
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lactoferrin; flour; malt.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 70; DB 5; Pred. No. 0.00073;
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Query Match

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AAY58733
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Best Local S
Matches 13
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Matches 13; Conserv
                                                                                                                                                                                                                         The present sequence is that of human lactoferrin. The invention relates to a synthetic gene (see AAZ58122) that encodes human lactoferrin but which has codon usage designed to maximise expression in plants. Transgenic plants that express human lactoferrin in a tissue-specific manner especially in the seeds, can be used in processes for the production of functional vegetal milk, fruit juices, fruit and/or vegetable homogenized foods (claimed). The transgenic plants are selected from solanaceae, cereals, leguminosae, fruit bearing plants and horticultural plants, especially soybean, tobacco and rice
                            17-AUG-2001
                                                AAB97382;
                                                                    AAB97382 standard;
                                                                                                                                                                                                        Sequence 692
                                                                                                                                                                                                                                                                                                                                  Disclosure;
                                                                                                                                                                                                                                                                                                                                                    Synthetic polynucleotide encoding human lactoferrin, used of functional foods, vegetal milks and human lactoferrin.
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N-PSDB; AAZ58122.
                                                                                                                                                                                                                                                                                                                                                                                                                 Fogher C;
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        lactoferrin
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ilarity 100.0%;
Conservative (
                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human;
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        (hLF)
                                                                    protein;
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No.
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RESULT 14
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Best Local S
Matches 13
                                                                                                                                                                                                                                                                                                                                          This invention relates to fragments (between 6 and 26 amino acids) of th human lactoferrin hLF protein (represented by the present sequence). Neterminal hLF peptides have antimicrobial activity. The peptides of the invention are used to treat microbial infections, especially infections by gram positive or negative bacteria, particularly listeria, Staphylococcus, Klebsiella or Escherichia species, especially L. monocytogenes, S. aureus and E. coli. Other uses include reducing inflammatory response by neutralising heparin or lipopolysaccharide or breducing cytokine production and neutrophil degranulation, inhibiting entry of viruses such as cytomegalovirus, herpes simplex virus 1 or HIV into cells, inhibiting myelopoiesis and reducing production of GM-CSF (granulocyte/macrophage colony stimulating factor)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human; lactoferrin; hLF; N-terminal; antimicrobial; heparin; inflammatory response; cytokine production reduction; neutrophil degranulation; myelopoiesis inhibition.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New polypeptides comprising the N-terminal region of human lactoferrin protein exhibit higher antimicrobial activity than the full length protein and are useful to treat bacterial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens.
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11-NOV-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim
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Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiesis; reperfusion injury; cytokine release;
                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                      AAG77906 standard; protein; 692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMING INTELLECTUAL
                                                         Human lactoferrin
                                                                                   18-JAN-2002
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13; Conserv
                                                                                                                                                                                                                                                                                                                    692 AA;
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                                                                                                                                                                                                                                ARRARVVWCAVGE 13
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                                                                                   (first entry)
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99US-0164975P.
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/label= Cationic_domain
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Pred. No. 0.0
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0.00073;
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RESULT 15
AAE28002
ID AAE28
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Matches 13
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                                                                                                                                                                                                                                                                                                                                                                                                                 can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-MAR-2000;
27-MAR-2000;
                                                                                                     Human;
infant
                                                                                                                                                                                                                                                                                                                                                                                       Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 26; Page 47-49; 49pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use
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                                                                                                                                         Human codon optimised lactoferrin
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                                      Misc-difference
                                                                            Homo
                                                                                                                                                                                                                                                                                                                                  Local Similarity les 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of lactoferrin for treatment of infectious diseases, eases and excess of heparin.
                                                                                                                                                                                                                                                                                                                                                                                                                be administered
                                                                                                                                                                                                                                                                                   341
                                                                                                   plant-derived food; flour; malt;
formula; lactoferrin.'
                                                                                                                                                                                                                                                                                                            1 ARRARVVWCAVGE 13
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                                    Location/Qualifiers 320. .321
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/label= Cationic_domain
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sequence shown as specification"
                           /note= "These amino
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Pred. No. 0.00073;
; Mismatches 0;
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             no acid
SEQ ID
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                                                                                                                    monocot
               residues are absent in the NO:2 in sequence listing of
                                                                                                                                                                                                                                                                                                                                                              Length 692,
                                                                                                                    seed; milk protein;
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WO200264814-A2

22-AUG-2002.

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Search completed: September 1, 2004, 00:09:44 Job time: 32.2867 secs
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                                                                                                                                 Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                           The invention relates to a nutritionally enhanced food comprising one or more plant-derived food ingredients, and as an additive, a seed composition containing a flour, extract, or malt obtained from mature monocot seeds and one or more seed-produced human milk proteins in substantially unpurified form. The nutritionally enhanced food and food additive compositions are useful for improving infant formula. Infant formulas containing the recombinant human milk proteins are useful in supplementing or enhancing the diet of infants, particularly very-low bith weight infants. The present sequence is human codon optimised
                                                                                                                                                                                                                                                                                                                                                                                                                                                    New nutritionally enhanced food compositions, useful for improving infant formula, or supplementing or enhancing the diet of infants, particularly very-low birth weight infants.
                                                                                                                                                                                                     Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                         Example 9; Page 104; 179pp; English.
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N-PSDB; AAD44922.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Huang N, Rodriguez RL, Hagie FE;
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02-MAY-2001; 2001US-00847232.
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                                                                                                                                                                                                                                       lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (VENT-) VENTRIA BIOSCIENCE.
                                                              1 ARRARVVWCAVGE 13
                                                                                                                                 100.0%; (nilarity 100.0%; )
Conservative 0;
                                                                                                                                 Score 70; DB 5; Length 69
Pred. No. 0.00073;
, Mismatches 0; Indels
                                                                                                                                                               Length 692;
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                                                                                                                                 Gaps
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6, Appli
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23456, A
13356, A
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23456, A
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Title:
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Maximum Match 100%
Listing first 45 summaries
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seq length: 2000000000
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2: /cgn2_6/ptodata/2
3: /cgn2_6/ptodata/2
4: /cgn2_6/ptodata/2
5: /cgn2_6/ptodata/2
6: /cgn2_6/ptodata/2
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/cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
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3 US-09-421-632-2
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US-08-724-586-2
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MOLECULE TYPE:
US-08-724-586-2
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                                                                                                         CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION UNMER: US 08/238,
FILING DATE: 05-MAY-1994
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505
TELEPHONE: (202) 038-6666
TELEPHONE: (202) 039-5350
INFORMATION: FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
TYPE: amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Approx. 8066469
                             Query Match
Best Local S
Matches 13
                                                                                                                                                                                                                                                                                   STREET: 400 Seventh St. N.W.
CITY: Washington D.C.
COUNTRY: U.S.A.
ZIP: 20004
ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Ve.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/724,586
FILING DATE: 30-SEPT-1996
CIRCELTECATION. 415
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Kruzel, Marian L.
APPLICANT: Kurzeki, Tomasz
APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Cloning, Expression, TITLE OF INVENTION: Lactoferrin NUMBER OF SEQUENCES: 8 CORRESPONDENCE ADDRESS: ADDRESS: Jacobson, Price, Holman & Standbresser: Jacobson, Price
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13;
        1 ARRARVVWCAVGE 13
                                          Similarity
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GY: linear
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                                100.0%; Score 70; DB 3;
100.0%; Pred. No. 0.00054;
tive 0; Mismatches 0;
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US-09-633-739-6
US-08-145-681-4
US-08-455-106-4
US-08-456-108-4
US-09-456-108-4
US-09-633-739-4
US-09-52-991A-234-5
US-09-252-991A-234-5
US-09-252-991A-214-5
US-09-252-991A-214-5
US-09-252-991A-214-5
US-09-252-991A-21-1-1-2-1
US-08-466-271-2-1
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US-09-421-632-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (202) 393-5350 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/421,632
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/724,586
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Patentin Release #1.0, Version #1,25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (202) 638-6666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Cloning, Ex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Kurecki, Tomasz
APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: 400 SEVER CITY: Washington D.C.
                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Player, William E. REGISTRATION NUMBER: 31,
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESSE: ADDRESSE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W.
                                                                      TITLE OF INVENTION: Cloning, Exp
                                                                                                                                                              APPLICANT: Kruzel, Marian L.
                                                                                                                                                                                                                                                                                                           343 ARRARVVWCAVGE 355
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Gollnick, Paul D.
Doyle, Darrell J.
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Pred. No. 0.00054;
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                                                                                         Expression, and Uses of Human
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Patent No. 5948613
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Best Local S
APPLICATION NUMBER: US/08/655.64
FILING DATE: 30-MAY 1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/992,538
FILING DATE: December 17, 1992
ATTORNEY/AGENT INFORMATION:
NAME: SCOTT, WATSON T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Teng, Christina
APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO: 2: SEQUENCE CHARACTERISTICS:
                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/655,640
                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS: CUSHMAN, DARBY & CUSHMAN
                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE: CUSHMAN, DAKE: & COLLEGE STREET: 1100 NEW YORK AVE. N.W., NINTH FLOOR CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 20005-3918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:

APPLICATION NUMBER: US/08/724,586

FILING DATE: 30-SEPT-1996

APPLICATION NUMBER: US 08/238,445

FILING DATE: 05-MAY-1994

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IEM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/932,190 FILING DATE: 17-Aug-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 694 amino acids
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US-08-655-640-4
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                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Patent No. 5948613
GENERAL INFORMATION:
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                                                                                                           Query Match
                                                                                                                                                                                                                                                             TELEFAX: (202) 822-0944
TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 4:
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INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 26,581
REFERENCE/DOCKET NUMBER: WTS/5683/98019/SAP
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
TELEFAX: (202) 822-0944
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 20005-3918
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/655,640
FILING DATE: 30-MX-1996
CICCUTTATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
STREET: 1100 NEW YORK AVE. N.W., NINTH FLOOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Teng, Christina
APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 705 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: WT
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
TELEPHX: (202) 822-0944
                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
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ATTORNEY/AGENT INFORMATION:
NAME: SCOTT, WATSON T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 435
PRIOR APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQUENCES:
                                                                                                                                                                                                  LENGTH: 708 amino acids
TYPE: amino acid
                                                                                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CITY: WASHINGTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                         Local Similarity
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360 ARRARVVWCAVGE 372
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o. 5948613
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                    1 ARRARVVWCAVGE 13
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                                                                      100.0%; Score 70; DB 2; ilarity 100.0%; Pred. No. 0.00055; Conservative 0; Mismatches 0;
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US-08-154-019-2
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Patent No. 5633076
GENERAL INFORMATION:
APPLICANT: Deboer,
APPLICANT: Strijker
APPLICANT: Platenbu
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US-08-154-019-2
                                                                                                                                                             Matches
                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/08/154,019
FILING DATE: 16-NOV-1993
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/461,333
FILING DATE: 05-JUN-1995
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION UNMBER: US 07/444,745
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
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MEDLUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: Patentin Release #1.0, Version #1.25

CURENIT APPLICATION DATA:

CURENIT APPLICATION NUMBER: US/08/154,019
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Lee, Sany ...
APPLICANT: Pieper, Frank
APPLICANT: Krimpenfort, Paul J.A.
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003123
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
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CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
                                                                                                                                                        Local Similarity 100. es 13; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
358 ARRARVVWCAVGE 370
                                                                          1 ARRARVVWCAVGE 13
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One Market Plaza, Steuart Tower, Suite 2000
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Heyneker, Herbert L.
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                                                                                                                                                    100.0%; Score 70; DB 1; 100.0%; Pred. No. 0.00055; ative 0; Mismatches 0;
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US-08-461-333-2 RESULT 7

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RESULT 8
US-08-464-167-2
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 GENERAL INFORM
APPLICANT:
APPLICANT:
APPLICANT:
                                                                      Sequence 2, Application US/08464167 Patent No. 6013857
                                                                                                                                                                                                                                                             Matches
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acids
TOPOLLOGY: 1:-
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APPLICANT: Krimpenfort, Paul J.A.
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 415-543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 15-JUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 05-JUN-:
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505 REFERENCE/DOCKET NUMBER: 16:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: One CLITY: San Francisco
                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                   358 ARRARVVWCAVGE 370
                                                      INFORMATION:
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                                                                                                                                                                                                                      1 ARRARVVWCAVGE 13
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One Market Plaza, Steuart Tower, Suite 2000
Strijker, Rein
Heyneker, Herbert L.
                                 Deboer, Herman A.
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Lee, Sang He
Pieper, Frank
                                                                                                                                                                                                                                                           Conservative
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Heyneker, Herbert L.
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01-DEC-1989
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                                                                                                                                                                                                                                                        100.0%; Score 70; DB 1;
100.0%; Pred. No. 0.00055
tive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                         DB 1; Length 709;
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RESULT 9
US-09-158-313-2
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                                                                                                                                                                                  Sequence 2, Application US/09158313 Patent No. 6066725
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                                                                                                                                                                                                                                                                                                                                                                                  Best Local
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PRICK APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRICK APPLICATION DATA:
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
                                                                                                            APPLICANT:
APPLICANT:
APPLICANT:
                                                                          APPLICANT:
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                          APPLICANT:
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APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
APPLICATION NUMBER: US 07/895,956
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: am:
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505 REFERENCE/DOCKET NUMBER: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 05-JUJ CLASSIFICATION: 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                          358 ARRARVVWCAVGE 370
                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                                                                                                                                                                         1 ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
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                                                                    Heyness
Platenburg, Ge
Sang He
                                                                                     Strijker, Rein
Heyneker, Herbert L.
Platenburg, Gerald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E: Townsend and Townsend and Crew
One Market Plaza, Steuart Tower, Suite 2000
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Lee, Sang He
Leer, Frank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Platenburg, o
                                                     Lee, Sang He
Pieper, Frank
                                                                                                                                              Deboer, Herman A.
                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                100.0%; Score 70; DB 3; 100.0%; Pred. No. 0.00055;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US/08/464,167
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                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                             Length 709
                                                                                                                                                                                                                                                                                                                                                               <u>,</u>
                                                                                                                                                                                                                                                                                                                                                             Gaps
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NUMBER OF SEQUENCES: 3

38

ADDRESSEE:

E: Townsend and Townsend and Crew One Market Plaza, Steuart Tower, Suite 2000

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GENERAL INFORMATION.

APPLICANT: Deboer, Herman A.

APPLICANT: Strijker, Rein

APPLICANT: Heyneker, Herbert L.

APPLICANT: Platenburg, Gerald

APPLICANT: Lee, Sang He

APPLICANT: Pieper, Frank

APPLICANT: Pieper, Frank
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; TOPOLOGY: linear; MOLECULE TYPE: protein US-09-158-313-2
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                                                                                                                                                                                                                                                                                                                            RESULT 10
US-08-476-798-2
                                                                                                                                                                                                                                                                                     Sequence 2, Applic Patent No. 6140552
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CORPUTER: IBM PC compatible
CORRATING SYSTEM: PC-DOS/MS-DOS
COERATING PSTEINT Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/158,313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 27-NOV-1990

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/444,745

FILING DATE: 01-DEC-1989

ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION:
                                                           NUMBER OF SEQUENCES: 3
CORRESPONDENCE ADDRESS:
                                                                                                 APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE: C
       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local Similarity
nes 13; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE:
                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                    358 ARRARVVWCAVGE 370
                                                                                                                                                                                                                                                                                                                                                                                                                                        1 ARRARVVWCAVGE 13
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: California
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SEE: Townsend and Townsend and Crew
: One Market Plaza, Steuart Tower, Suite 2000
San Francisco
                                                                                                                                                                                                                                                                                                         Application US/08476798
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Pred. No. 0.00055;
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APPLICANT: May, Gregory S.

TITLE OF INVENTION: Production of Recombinant Lactoferrin
TITLE OF INVENTION: and Lactoferrin Polypeptides Using cDNA Sequences
TITLE OF INVENTION: Various Organsims
NUMBER OF SEQUENCES: 14
CORRESPONDENCE ADDRESS:
ADDRESSE: Baker & Botts, L.L.P.
STREET: 910 Louisiana St

in

APPLICANT:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PALENTIN Release #1.0,
CURRENT APPLICATION DATA:

Version

#1.25

ZIP: 77002 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy

CITY: Houston STATE: Texas COUNTRY: USA

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                                                                                                                          RESULT 11
US-08-145-681-2
                                               Patent No. 5571691
GENERAL INFORMATTOW
                                                                                                                                                                                                                                                                                  Query Match 100.0%; Score 70; DB 3; Best Local Similarity 100.0%; Pred. No. 0.00055; Matches 13; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/08/476,798
APPLICATION UNDER: US/08/476,798
FILING DATE: 07-UUN-1995
CCLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UUN-1993
PRIOR APPLICATION DATA:
APPLICATION UNDER: US 07/895,956
FILING DATE: 15-UUN-1992
PRIOR APPLICATION DATA:
15-UUN-1992
PRIOR APPLICATION DATA:
110 07/610 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRICR APPLICATION DATA:
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 166
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 709 amino acids
                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                       358 ARRARVVWCAVGE 370
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Conneely, Orla M.
Headon, Denis R.
O'Malley, Bert W.
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US-08-145-681-2
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TELEPAX: 713/229/1522
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 711 amino acids
TELEFAX: 7136515246
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                               PRIOR APPLICATION DATA:

PRIOR APPLICATION NUMBER: US 07/873,30

PILING DATE: 24-APR-1992

ATTORNEY,AGENT INFORMATION:

NAME: Adler Ph.D., Benjamin A.

REGISTRATION NUMBER: 35,423

REGISTRATION NUMBER: 35,423
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein HYPOTHETICAL: YES ANTI-SENSE: NO
                                                            REFERENCE/DOCKET NUMBER: D5
TELECOMMUNICATION INFORMATION:
TELEPHONE: 7136515587
                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IEM PC COMPUTED

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Conneely, Orla M.
APPLICANT: Headon, Denis R.
APPLICANT: O'Malley, Bert W.
TITLE OF INVENTION: Production of Recombinant Human
TITLE OF INVENTION: Lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORIGINAL SOURCE: ORGANISM: H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: McGregor, Martin L.
REGISTRATION NUMBER: 29,329
REFERENCE/DOCKET NUMBER: 19
TELECOMMUNICATION INFORMATION:
TELEPHONE: 713/229/1874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: amino acids
TOPOLOGY: limit
                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY: USA
ZIP: 77010-3095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 435
                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                               CLASSIFICATION: 530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Application US/08250308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Texas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B: Fulbright & Jaworski Patent Department
1301 McKinney St.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H. sapiens
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                                                                                                                                                                                                        US 07/873,304
                                                                                                                                                                                                                                                                                      US/08/250,306
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RESULT 13
US-08-154-019-4
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; MOLECULE TYPE: protein US-08-154-019-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-250-308-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/154,019
APPLICATION: 435
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/461,333
FILING DATE: 05-JUN-1995
APPLICATION NUMBER: US 08/077,788
APPLICATION NUMBER: US 08/077,788
APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                            TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Deboer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: linear MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower, &
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Pieper, Frank
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                         REGISTRATION NUMBER: 37,505
REFERENCE/LOCKET NUMBER: 16:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 0.
FILING DATE: 27 NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0.
FILING DATE: 01-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Polor-
                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                  NAME: Liebescheutz, Joe O
REGISTRATION NUMBER: 37,5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                          TELEPHONE:
                                                                                              LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mo. 563307
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                                                                       amino acid
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                                                                                              711 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strijker, Rein
Heyneker, Herbert L.
Platenburg, Gerald
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                               415-543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   100.0%; Score 70; DB 1; Length 711; 100.0%; Pred. No. 0.00055;
                                                                                                                                                                                                                                                                                                                                                              US 07/444,745
                                                                                                                                                                                                                                                                                                                                                                                                                                     US 07/619,131
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Matches

13; Conservative

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Query Match Best Local Similarity

100.0%;

Score 70; DB 1; Pred. No. 0.00055; ; Mismatches 0;

Length 711;
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ARRARVVWCAVGE 372

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1 ARRARVVWCAVGE 13
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Search completed: September 1, 2004, 00:18:38 Job time: 8.40667 secs

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                                                                               US-08-461-333-4
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Matches
                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UUN-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-UUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
PRIOR APPLICATION NUMBER: US 07/444,745
APPLICATION DATE: 01-DEC-1989
                                                                                                                                                        TELEPAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 711 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Pieper, Frank
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Reco
TITLE OF INVENTION: by Bovine Species
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                         NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505 REGISTRATION NUMBER: 37,505 REFERENCE/DOCKET NUMBER: 16.00 TELECOMMUNICATION INFORMATION: TELEPHONE: 415-543-9600
                                                                                                                                                                                                                                                                                                                                          FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Tower, Suite 2000 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 05-JUN-1995
CLASSIFICATION: 800
                                                                                                                        TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4
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13; Conserv
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                                                                                                                                    amino acid
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Heyneker, Herbert L.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Deboer, Herman A.
  Conservative
                                                                                                                        linear
                     100.0%; Score 70; DB 1; 100.0%; Pred. No. 0.00055;
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                                                                                                                                                                                                                                                                                    16994-003123
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of Recombinant Polypeptides
Species and Transgenic Methods
    Mismatches
                                        Length 711;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/453,703
FILING DATE: Concurrently herewith
CLASSIFICATION A35
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/145,681
APPLICATION NUMBER: 25,227
REGISTRATION NUMBER: 25,227
REGISTRATION NUMBER: 25,227
                                                                                                                                                                Matches
                                                                                                                                                                                                                                      Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: 415-854-3694
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: May, Gregorithm of invention: it intle of invention: it intle of invention: it invention:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                           ANTI-SENSE: NO ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear MOLECULE TYPE: protein HYPOTHETICAL: YES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 711 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       REFERENCE/DOCKET NUMBER: 821
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-854-3660
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
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CITY: New York
STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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STREET: 1155 Avenue of the Americas
                                                                                                                                                            Local Similarity
les 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                ORGANISM: H. sapiens
360
                                                                              1 ARRARVVWCAVGE 13
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    ARRARVVWCAVGE 372
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                                                                                                                                                            100.0%;
Llarity 100.0%;
Conservative 0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Denis R.
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and Lactoferrin Polypeptides Using cDNA Sequences
Various Organisms
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                                                                                                                                                                Score 70; DB 1; I Pred. No. 0.00055; Mismatches 0;
                                                                                                                                                                                                                                          Length 711;
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Database
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Published Applications AA:*

1: /cgn2 6/ptodata/2/pubpas/US07 PUBCOMB.pep:*

2: /cgn2 6/ptodata/2/pubpas/US07 NEW PUB.pep:*

3: /cgn2 6/ptodata/2/pubpas/US06 NEW PUB.pep:*

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5: /cgn2 6/ptodata/2/pubpas/US07 NEW PUB.pep:*

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7: /cgn2 6/ptodata/2/pubpas/US08 PUBCOMB.pep:*

8: /cgn2 6/ptodata/2/pubpas/US08 PUBCOMB.pep:*

9: /cgn2 6/ptodata/2/pubpas/US08 PUBCOMB.pep:*

10: /cgn2 6/ptodata/2/pubpas/US09 PUBCOMB.pep:*

11: /cgn2 6/ptodata/2/pubpas/US09 PUBCOMB.pep:*

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17: /cgn2 6/ptodata/2/pubpas/US10 PUBCOMB.pep:*

18: /cgn2 6/ptodata/2/pubpas/US10 PUBCOMB.pep:*

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18: /cgn2 6/ptodata/2/pubpas/US10 PUBCOMB.pep:*

18: /cgn2 6/ptodata/2/pubpas/US10 PUBCOMB.pep:*
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137.988 Million cell updates/sec
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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		SUMMARIES	
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Result	Score		5	BB	ID	Description
ָּבָ	70	100.0	359	14	US-10-169-297-49	Sequence
2	70	100.0	690	14	US-10-076-816-4	Sequence
ω	70	100.0	690	14	US-10-077-381-4	Sequence 4
4.	70	100.0	690	16	US-10-639-835-4	
ហ	70	100.0	694	13	US-10-023-096-2	Sequence
თ	70	100.0	709	14	US-10-170-221-2	Sequence
7	70	100.0	711	14	US-10-169-297-9	Sequence
œ	70	100.0	711	14	US-10-170-221-4	Sequence 4,
9	70	100.0	711	15	US-10-341-434-202	
10	70	100.0	711	15	US-10-341-434-218	Sequence
11	70	100.0		15	US-10-440-464-69	Sequence
12	70	100.0		16	US-10-408-765A-2000	Sequence
13	54	77.1	234	14	US-10-169-297-35	Sequence
14	54	77.1	708	14	US-10-169-297-8	Sequence 8, Appl
<u>1</u> 5	46	л л	77	٥	115-09-738-626-3901	Segmence 3901 Ap

1 58.6 361 12 US-10-425-114-49461 Sequence 57.9 460 12 US-10-437-93-13123 Sequence 57.9 460 12 US-10-425-114-50342 Sequence 57.1 261 12 US-10-425-124-65782 Sequence 57.1 261 12 US-10-282-122A-65782 Sequence 57.1 261 12 US-10-282-122A-65358 Sequence 57.1 333 14 US-10-408-765A-241 Sequence 57.1 333 14 US-10-308-566-2081 Sequence 57.1 567 16 US-10-308-566-2081 Sequence 57.1 662 16 US-10-308-566-2432 Sequence 57.1 662 16 US-10-308-566-2432 Sequence 57.1 662 16 US-10-308-566-789 Sequence 57.1 662 16 US-10-308-566-788 Sequence 0 57.1 673 15 US-10-409-701-21 Sequence 0 55.7 147 16 US-10-437-933-124461 Sequence 55.7 158 16 US-10-437-933-12436 Sequence 55.7 158 16 US-10-437-933-12436 Sequence 55.7 158 16 US-10-437-933-12436 Sequence 55.7 158 16 US-10-437-933-12439 Sequence 55.7 103 16 US-10-437-933-12539 Sequence 55.7 103 16 US-10-437-933-12539 Sequence 55.7 103 16 US-10-424-599-23449 Sequence 55.7 103 16 US-10-424-599-23449 Sequence 55.7 103 16 US-10-424-599-23449 Sequence 55.7 103 16 US-10-424-599-23499 Sequence 55.7 103 14 US-10-156-761-10961 Sequence 55.7 103 14 US-10-156-761-10961	11110111111111111111111111111111111111	16
8.6 361 12 US-10-425-114-49461 Sequenc 7.0 462 10 US-10-425-114-50342 Sequenc 7.0 460 12 US-10-425-114-50342 Sequenc 7.1 76 16 US-10-437-963-154283 Sequenc 7.1 261 12 US-10-282-1122A-65782 Sequenc 7.1 261 12 US-10-282-1122A-65782 Sequenc 7.1 339 14 US-10-282-122A-65782 Sequenc 7.1 567 16 US-10-389-566-2081 Sequenc 7.1 662 16 US-10-389-566-2081 Sequenc 7.1 662 16 US-10-389-566-788 Sequenc 7.1 662 16 US-10-389-566-788 Sequenc 7.1 662 16 US-10-389-566-788 Sequenc 7.1 662 16 US-10-389-566-1436 Sequenc 7.1 673 16 US-10-389-563-124461 Sequenc 7.1 673 16 US-10-389-563-124461 Sequenc 7.1 673 16 US-10-379-963-125534 Sequenc 5.7 158 16 US-10-337-963-125592 Sequenc 5.7 1016 15 US-10-369-433-952 Sequenc 5.7 1016 15 US-10-379-963-125592 Sequenc 5.7 1016 15 US-1	0	44
361 12 US-10-425-114-49461 Sequence 460 12 US-10-427-963-133123 Sequence 76 16 US-10-427-963-154283 Sequence 76 16 US-10-428-1522-655782 Sequence 76 17 US-10-282-1222-6538 Sequence 76 18 US-10-282-1222-6538 Sequence 77 19 US-10-282-1222-6538 Sequence 78 19 US-10-408-7658-241 Sequence 78 19 US-10-189-566-2081 Sequence 78 19 US-10-389-566-2081 Sequence 78 19 US-10-389-566-789 Sequence 78 19 US-10-389-566-7436 Sequence 78 19 US-10-389-566-7436 Sequence 79 10 US-10-389-566-7436 Sequence 79 11 US-10-389-566-7436 Sequence 79 12 US-10-389-566-7436 Sequence 79 12 US-10-437-963-113853 Sequence 158 11 US-10-437-963-113853 Sequence 158 12 US-10-437-963-113853 Sequence 158 12 US-10-437-963-1225-47701 Sequence 158 12 US-10-437-963-126592 Sequence 158 12 US-10-156-761-10961 Sequence	55555555555555555555555555555555555555	12
2 US-10-425-114-49461 Sequence US-10-437-963-133123 Sequence 2 US-10-437-963-154283 Sequence 2 US-10-282-122A-65782 Sequence 2 US-10-282-122A-65358 Sequence 2 US-10-282-122A-65358 Sequence 2 US-10-282-122A-65358 Sequence 2 US-10-389-566-2081 Sequence 2 US-10-389-566-2081 Sequence 2 US-10-389-566-2081 Sequence 2 US-10-389-566-1436 Sequence 2 US-10-437-963-12534 Sequence 2 US-10-437-963-12539 Sequence 2 US-10-437-963-12592 Sequence 2 US-10-437-963-12599 Sequence 2 US-10-437-963-12599 Sequence 3 US-10-437-963-12599 Sequence 4 US-10-156-761-10961 Sequence		0
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14	quence 10% quence 15% quence 24% quence 24% quence 133 quence 133 quence 513 quence 657 quence 657 quence 261 quence 278 quence 218 quence 128 quence 139 quence 139 quence 139 quence 139 quence 247 quence 247	equence 14

ALIGNMENTS

RESULT 1 US-10-169-297-49

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Sequence 49, Application US/10169297

Publication No. US20030171276A1

GENERAL INFORMATION:
APPLICANT: Tohdoh, Naoki
APPLICANT: Muzata, Masashi
APPLICANT: Enjoji, Takashi
CITLE OF INVENTION: Preventives and Remedies for Chronic
FILE REFERENCE: 3435.1000-000

CURRENT APPLICATION NUMBER: US/10/169,297

CURRENT FILING DATE: 2002-10-31

PRIOR APPLICATION NUMBER: BCT/JP00/09393

PRIOR APPLICATION NUMBER: BCT/JP00/09
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APPLICANT: Hagie, Frank E.

APPLICANT: Hagie, Frank E.

FILE OF INVENTION: Feed Additive Compositions and Methods

FILE REFERENCE: 5065-8021_US00

CURRENT APPLICATION NUMBER: US/10/076,816

CURRENT FILING DATE: 2002-02-14

PRIOR APPLICATION NUMBER: US 60/269,188

PRIOR APPLICATION NUMBER: US 09/847,232

PRIOR FILING DATE: 2001-02-14

PRIOR FILING DATE: 2001-02-06

PRIOR APPLICATION NUMBER: US 60/266,929

PRIOR APPLICATION NUMBER: US 60/266,929

PRIOR APPLICATION NUMBER: US 60/266,929

PRIOR APPLICATION NUMBER: US 60/201,182

PRIOR APPLICATION NUMBER: US 60/201,182

PRIOR APPLICATION ONMER: US 60/201,182
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APPLICANT: Rodriguez, Raymond
APPLICANT: Redriguez, Raymond
APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins in
TITLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022 US900
CURRENT APPLICATION UNMBER: US/10/077,381
CURRENT FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 69/847,232
PRIOR APPLICATION NUMBER: US 69/847,232
PRIOR APPLICATION NUMBER: US 69/847,232
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR APPLICATION NUMBER: US 60/261,182
PRIOR APPLICATION NUMBER: US 60/201,182
PRIOR TILING DATE: 2000-05-02
NUMBER OF SEQ ID NOS: 33
SOFTWARE: FastSEQ for Windows Version 4.0
RESULT 4
US-10-639-835-4
                                                                                                                                                                                                                                                                                                                                                  US-10-077-381-4
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                                                                                                                                                                                                                                                               Query Match
Best Local (
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TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 690
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                                                                                                                                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                           339 ARRARVVWCÁVGE 351
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                                                                                                                                                                      1 ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 ARRARVVWCAVGE 13
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                                                                                                                                                                                                                                                      1 100.0%; Score 70; DB 14; Similarity 100.0%; Pred. No. 0.0012;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        h 100.0%; Score 70; Similarity 100.0%; Pred. No.
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APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins in TITLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022_US01
CURRENT APPLICATION NUMBER: US/10/639,835
CURRENT FILING DATE: 2003-08-12
PRIOR APPLICATION NUMBER: US 10/077,381
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR FILING DATE: 2001-02-14
PRIOR PRILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR APPLICATION NUMBER: US 60/269,199
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR APPLICATION NUMBER: US 60/201,182
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Publication No. US20020160941A1
GENERAL INFORMATION:
APPLICANT: Kruzel, Marian L.
                        SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/023,096
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/724,586
FILING DATE: 30-SEPT-1996
APPLICATION NUMBER: US 08/238,445
FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
DEGISTREPATTON WINDER: DEGISTREPATTON
DEGISTREPATTON WINDER: DEGISTREPATTON
DEGISTREPATT
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SEQ ID NO 4
LENGTH: 690
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ORGANISM: Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Huang, Ning
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APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Jacobson, Price, Holman & Stern
STREET: 400 Seventh St. N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Kurecki, Tomasz
APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
TITLE OF INVENTION: Cloning, Ex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 400 Seventh S
CITY: Washington D.C.
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: U
ZIP: 20004
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Hagie, Frank E.
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RESULT 6
US-10-170-221-2
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INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                    NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
TELEPHONE: 415-543-9600
TELEPAX: 415-543-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                 COMPUTER READABLE FORM:

MEDIUM TYPE; Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/10/170,221
FILING DATE: 11-Jun-2002
CLASSIFICATION LOTA:
APPLICATION DATA:
APPLICATION NUMBER: US/08/476,798
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US/08/77,788
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US/07/895,956
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US/07/895,956
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US/07/895,956
FILING DATE: 15-JUN-1990
APPLICATION NUMBER: US/07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
NAME: Liebsscheutz, Joe O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
by Bovine Species and Transgenic Methods
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ADDRESSEE: Townsend and Townsend and Crew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Deboer, Herman A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           343 ARRARVVWCAVGE 355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13;
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STATE: California
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                                      LENGTH: 709 amino acids
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Heyneker, Herbert L.
Platenburg, Gerald
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Pieper, Frank
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Pred. No. 0.0012;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-10-170-221-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; TYPE: PRT ; ORGANISM: Homo sapiens US-10-169-297-9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/10170221 Publication No. US20030192068A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
ZIP: 94105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                   Pieper, Frank
Krimpenfort, Paul J.A.
Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
by Bovine Species and Transgenic Methods
                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower,
                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360 ARRARVVWCAVGE 372
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                                                                                                                      STATE: California
                                                                                                    COUNTRY:
                                                                                                                                          CITY: San Francisco
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Heyneker, Herbert L.
Platenburg, Gerald
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Lee, Sang He
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                                                                                               USA
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Suite 2000

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Sequence 9, Application US/10169297

Publication No. US20030171276A1

GENERAL INFORMATION:

APPLICANT: Tohdoh, Naoki

APPLICANT: Murata, Masashi

APPLICANT: Enjoji, Takashi

APPLICANT: Enjoji, Takashi

FILE OF INVENTION: Preventives and Remedies for Chronic

FILE OF INVENTION: Hepatitis

FILE REFERENCE: 3435.1000-000

CURRENT PILING DATE: 2002-10-31

CURRENT FILING DATE: 2002-10-31

PRIOR APPLICATION NUMBER: US/10/169,297

CURRENT FILING DATE: 2000-12-28

PRIOR FILING DATE: 1999-12-28

PRIOR FILING DATE: 1999-12-28

NUMBER OF SEQ ID NOS: 50

COMMENDE: ENGLES OF SEC INC. Various Annual Control of Sec In Nos: 50
                                                                                                                                                                                                                         SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.
Matches 13; Conservative
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MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO: 2:
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1 ARRARVVWCAVGE 13
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                                             Conservative
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                                                                 100.0%; Score 70; DB 14; 100.0%; Pred. No. 0.0013;
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Pred. No. 0.0013;
                                             0
                                                                                      Length 711;
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                                           Gaps
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Best Local S
                                                                                Matches
                                                                                                                                                                                                             SOFTWARE: PatentIn version 3.1
SEQ ID NO 202
LENGTH: 711
                                                                                                                Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Differentially Regulated Prostate Cancer Genes
FILE REFERENCE: 90 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
PRIOR APPLICATION NUMBER: US 60/348,164
PRIOR PILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: US 60/348,119
PRIOR APPLICATION NUMBER: US 60/348,119
PRIOR APPLICATION NUMBER: US 60/348,119
PRIOR FILING DATE: 2002-01-15
PRIOR FILING DATE: 2002-01-15
PRIOR FILING DATE: 2002-01-15
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: OriGene Technologies
                                                                                                                                                                                                TYPE: PRT
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                                                                         Local Similarity
nes 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US/08/476,798
FILING DATE: 07-JUN-1995
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 415-543-9600
  360 ARRARVVWCAVGE 372
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                                    ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/10/170,221 FILING DATE: 11-Jun-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/10341434
o. US20030215835A1
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                                                                         Conservative
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                                                                                          100.0%;
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                                                                                        Score 70; DB 15;
Pred. No. 0.0013;
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                                                                                                              DB 15;
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CURRENT FILING DATE: 2003-05-19
PRIOR APPLICATION NUMBER: 60/380,872
PRIOR FILING DATE: 2002-05-17
PRIOR APPLICATION NUMBER: 60/448,922
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 2003-02-24
PRIOR APPLICATION NUMBER: 60/448,874
PRIOR FILING DATE: 2003-02-24
NUMBER OF SEQ ID NOS: 185
SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-10-440-464-69
                                                                                          Query Match
Best Local Sim
Matches 13;
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Publication No. US20030215835A1
GENERAL INFORMATION:
APPLICANT: Origene Technologies
TITLE OF INVENTION: Differentially Regulated Prostate Cancer Genes
FILE REFERENCE: 90 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn version 3.1
SEQ ID NO 218
LENGTH: 711
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local &
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: CHERRINGTON, JULIE
APPLICANT: SCHILLING, JIM
TITLE OF INVENTION: NOVEL BIOMARKERS OF TYROSINE KINASE INHIBITOR EXPOSURE
TITLE OF INVENTION: AND ACTIVITY IN MAMMALS
FILE REFERENCE: 038602/1592
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: US 60/348,164
PRIOR FILING DATE: 2002-01-15
PRIOR APPLICATION NUMBER: US 60/348,119
PRIOR FILING DATE: 2002-01-15
NUMBER OF SEQ ID NOS: 238
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: DEPRIMO, SAMUEL APPLICANT: O'FARRELL, ANN APPLICANT: MORIMOTO, ALYS
                                                                                                                                                                                                             ORGANISM: Homo sapiens
                                                                                                                                                                                                                                        LENGTH: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
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360 ARRARVVWCAVGE 372
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                                             1 ARRARVVWCAVGE 13
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                                                                                                                Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  O'FARRELL, ANNE-MARIE
MORIMOTO, ALYSSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10440464
                                                                                     100.0%; Score 70; DB 15; Length 711; ilarity 100.0%; Pred. No. 0.0013; Conservative 0; Mismatches 0; Indels
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FILE REFERENCE: 660088.465
CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT FILING DATE: 2003-04-04
NUMBER OF SEQ ID NOS: 3077
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2000
LENGTH: 711
TYPE: PRT
ORGANISM: Homo sapiens
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RESULT 14
US-10-169-297-8
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                                                                                                                                                                                                                                                                                                           SOFTWARE: FastSEQ for Windows Version 4.0 SEQ ID NO 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 35, Applica Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2000, Application US/10408765A Publication No. US20040101874A1
                                                                                                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Murata, Masashi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies for Chronic
TITLE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT FILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR FILING DATE: 2000-12-28
PRIOR FILING DATE: 2000-12-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Ghosh, Soumitra S.
APPLICANT: Fahy, Eoin D.
APPLICANT: Zhang, Bing
                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: JP 11/374087
PRIOR FILING DATE: 1999-12-28
NUMBER OF SEQ ID NOS: 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Tohdoh, Naoki
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                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Bos taurus
                                                                                                                                                                                                                                                                                        LENGTH: 234
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ITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
                                                                                                                                                   Local Similarity nes 10; Conserv
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                                                                          ARYTRVVWCAVG 82
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Taylor, Steven W.
Glenn, Gary M.
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                                                                                                                                                     Conservative
                                                                                                                                                                        77.1%;
83.3%;
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Pred. No. 0.25;
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                                                                                                                                                                                            DB 14; Length 234;
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Sequence 8, Application US/10169297 Publication No. US20030171276A1 GENERAL INFORMATION:

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RRLRTSWCAVG 39

Search completed: September Job time: 30.64 secs

2004, 00:49:19

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APPLICANT: Murata, Massahi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies for Chronic
TITLE OF INVENTION: Hepatitis
TITLE OF INVENTION: Hepatitis
TITLE OF INVENTION: Hepatitis
TITLE OF INVENTION HEPATITIS
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT FILING DATE: 2000-10-31
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR FILING DATE: 2000-12-28
PRIOR FILING DATE: 2000-12-28
NUMBER OF SEQ ID NOS: 50
SOFTWARE: FastSEQ for Windows Version 4.0
$5EQ ID NO 8
$5EQ ID NO 8
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                                                                                                              US-09-738-626-3901
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US-09-738-626-3901
                                                                                                                                                                    SOFTWARE: PatentIn ver.
SEQ ID NO 3901
LENGTH: 77
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Matches 10; Conserv
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Best Local :
                                       Matches
                                                                         Query Match
                                                       Best Local Similarity
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PRIOR FILING DATE: 1999-12-16
PRIOR PPLICATION NUMBER: JF 00/159162
PRIOR FILING DATE: 2000-04-07
PRIOR APPLICATION NUMBER: JF 00/280988
PRIOR FILING DATE: 2000-08-03
                                                                                                                                                                                                                    PRIOR FILING DATE: 2000-08-03
NUMBER OF SEQ ID NOS: 7059
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APPLICANT: MIZOGUCHI, HIROS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masa
APPLICANT: Enjoji, Taka
                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: NOVEL POLYNUCLEOTIDES
FILE REFERENCE: 249-125
CURRENT APPLICATION NUMBER: US/09/738,626
CURRENT FILING DATE: 2000-12-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                            TYPE: PRT ORGANISM: Corynebacterium glutamicum
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 2 RRARVVWCAVG 12
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IKEDA, MASATO
OZAKI, AKIO
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OCHIAI, KEIKO
YOKOI, HARUHIKO
TATEISHI, NAOKO
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ANDO, SEIKO
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                                       Conservative
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72.7%;
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                                       0,
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Pred. No.
                                                     Score 46; DB 9;
Pred. No. 2.1;
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1 70 100.0 711 1 TFHUL 2 58 82.9 703 2 A45543 3 54 77.1 708 2 JC2323 4 53 75.7 708 2 JC2323 5 74.3 70.7 1 A28438 6 46 65.7 70.1 127228 6 46 62.9 70.5 1 TC4728 7 44 62.9 70.5 1 TC4728 8 43 61.4 383 2 G83500 9 42 60.0 1099 2 E81185 10 40 57.1 260 2 E81185 11 40 57.1 436 2 T36706 11 40 57.1 509 2 T02260 12 40 57.1 509 2 T02260 13 40 57.1 509 2 T02260 14 59.5 56.4 129 2 C07219 16 39 55.7 285 1 IDECRP 19 39 55.7 285 2 I64780 19 39 55.7 491 2 T46684 20 39 55.7 549 2 T23526 21 38 54.3 330 2 F72526 22 38 54.3 330 2 F72526 23 38 54.3 330 2 A33560 24 38 54.3 337 2 B71340 25 38 54.3 336 2 G83510 26 38 54.3 337 2 B71340 27 38 54.3 386 2 G97316 28 38 54.3 386 2 G97316 29 38 54.3 315 2 T08229 20 38 54.3 37 2 B71340 21 38 54.3 37 2 B71340 22 38 54.3 37 2 B71340 23 38 54.3 386 2 G97316 24 38 54.3 396 2 G97316 25 38 54.3 397 2 B71340 25 38 54.3 398 2 G97316 26 38 54.3 398 2 G97316 27 38 54.3 398 2 G97316 28 38 54.3 398 2 G97316 29 38 54.3 398 2 G97316 20 38 54.3 398 2 G97316 20 38 54.3 398 2 G97316 20 38 54.3 398 2 G97316 21 32 52 52 52 52 52 52 52 52 52 52 52 52 52	Result Query No. Score Match Length DB ID Description	s the nuer than ved by a	Database : PIR 78:* 1: pir1:* 2: pir2:* 3: pir3:* 4. pir3:*	MAXIMUM DB seq length: 0 Maximum DB seq length: 200000000 Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries	umber of hits sa	Searched: 283366 segs, 96191526 residues	Scoring table: BLOSUM62 Gapop 10.0 , Gapext 0.5	Title: US-09-508-095-16 Perfect score: 70 Sequence: 1 ARRARVVWCAVGE 13	Run on: September 1, 2004, 00:03:45; Search time 7.54 Seconds (without alignments) 165.847 Million cell updates/sec	OM protein - protein search, using sw model	GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.
A, Cross-reterances: EMBL:xx536; NID:g34415; PIDN:CAA37914.1; PID:g34416 RNTeng, C.T.; Liu, Y.; Yang, N.; Walmer, D.; Panella, T. WO1. Endocrinol. 6, 1969-1981, 1992 A;Title: Differential molecular mechanism of the estrogen action that regulates lacto A;Reference number: A45401 A;Reference number: A45401; MUID:93125571; PMID:1480183 A;Accession: A45401 A;Rotecule type: DNA A;Residues: 1-15 <tenn \$10324="" \$10324;="" \$1583;="" \$20-31="" \$271="" \$571="" (ncbip:122202)="" 18,="" 1990="" 4013,="" <="" a;accession:="" a;cross-references:="" a;experimental="" a;note:="" a;reference="" a;title:="" acids="" baby-hamster="" backbone="" cdna.="" cells.="" cloned="" expression="" extracted="" from="" gb:552659;="" human="" in="" j.e.="" kidney="" lactoferrin="" m.j.;="" muid:90326549;="" muid:91264786;="" ncbi="" nid:g263311;="" nucleic="" nucleotide="" number:="" of="" ogden,="" pid:g263312="" pidn:aab24877.1;="" placenta="" pmid:2049066="" pmid:2374734="" pow-="" r;powell,="" res.="" sequence="" source:=""> A;Recidues: 20-31 < \$571 > A;Accession: \$20344 A;Accession: \$20349 A;Accession: \$20441 A;Accession: \$20484 A;Accession: \$20484 A;Accession: \$20484 A;Accession: \$20486 A;Accession:</tenn>	A; Title: Complete nucleotide sequence of human mammary gland lactoferrin. A; Reference number: S11228; MUID:90384839; PMID:2402455 A; Accession: S11228 A; Molecule type: mRNA A; Residues: 1-148; 'T', 150-422, 'C', 424-711 < REY> A; Residues: 1-148; 'T', 150-422, 'C', 424-711 < REY>	, PID	R;Cho, Y. submitted to the EMBL Data Library, March 1994 A;Reference number: G06820 A;Accession: G01394 A;Status: preliminary; translated from GB/EMBL/DDBJ	TFHUL lactotransferrin precursor [validated] - human N;Alternate names: lactoferrin C;Species: Homo sapiens (man) C;Species: Homo sapiens (man) C;Date: 31-Max-1992 #sequence revision 21-Nov-1997 #text_change 08-Dec-2000 C;Date: 30-Max-1992 #sequence revision 21-Nov-1997 #text_change 08-Dec-2000 C;Accession: G01394; S11228; A45401; S10324; S15853; S20841; S07160; A61169; A31000;	RESULT 1	ALIGNMENTS	5 36 51.4 134 2	1 37 52.9 483 2 F83205 probable lyse 2 37 52.9 706 2 S33761 transferrin p 3 37 52.9 973 2 AB2340 hypothetical	37 37 52.9 176 2 F72563 hypothetical prote 138 37 52.9 203 2 JC7521 ribosomal protein 38 37 52.9 203 2 JC7521 maltose transport	4 38 54.3 765 2 E98254 5 38 54.3 870 2 T39731	0 38 54.3 437 2 B82778 ccll cycle protei 1 38 54.3 505 2 B81021 conserved hypothe 2 38 54.3 505 2 C81165 hypothetical hypo

A;Note: sequence extracted from NCBI backbone (NCBIP:122202) R;Powell, M.J.; Ogden, J.E. Nucleic Acids Res. 18, 4013, 1990 A;Title: Nucleotide sequence of human lactoferrin cDNA. A;Reference number: S10324; MUID:90326549; PMID:2374734 A;Accession: S10324 A;Molecule type: mZNA A;Residues: 3-711 <pow> A;Residues: 3-711 <pow> A;Cross references EMBL:X52941; NID:g34411; PIDN:CAA37116.1; PID:g34412 A;Stowell, K.M.; Rado, T.A.; Funk, W.D.; Tweedie, J.W. Biochem. J. 276, 349-355, 1991 A;Title: Expression of cloned human lactoferrin in baby-hamster kidney cells. A;Reference number: S15853; MUID:91264786; PMID:2049066</pow></pow>	A;Molecule type: mRNA A;Molecule type: mRNA A;Molecule type: mRNA A;Residues: 1-148'T',150-422,'C',424-711 <rey> A;Residues: 1-148'T',150-422,'C',424-711 <rey> A;Cross-references: EMBL:X53961; NID:g34415; PIDN:CAA37914.1; PID:g34416 A;Cress-references: EMBL:X53961; NID:g34415; Panella, T. Mol. Endocrinol. 6, 1969-1981, 1992 A;Title: Differential molecular mechanism of the estrogen action that regulates lactofer A;Reference number: A45401; MUID:93125571; PMID:1480183 A;Recession: A45401 A;Molecule type: DNA A;Residues: 1-15 <tenn a:experimental="" a;cross-references:="" gb:s52659;="" nid:g263311;="" nlacenta<="" pid:g263312="" pidn:aab24877.1;="" schiffe:="" td=""><td>submitted to the EMBL Data Library, March 1994 A;Reference number: G06820 A;Reference number: G06820 A;Recession: G01394 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Mclecule type: mENDA A;Residues: 1-711 <cho> A;Cross-references: EMBL:U07643; NID:g467236; PIDN:AAB60324.1; PID:g467237 A;Rey, M.W.; Woloshuk, S.L.; deBoer, H.A.; Pieper, F.R. Nucleic Acids Res. 18, 5288, 1990 A;Title: Complete nucleotide sequence of human mammary gland lactoferrin. A;Reference number: S11228; MUID:90384839; PMID:2402455</cho></td><td>RESULT 1 TPHUL lactotransferrin precursor [validated] - human N;Alternate names: lactoferrin C;Species: Homo sapiens (man) C;Accession: G01394; S11228; Ā45401; S10324; S15853; S20841; S07160; A61169; A31000; S74</td><td>30 38 54.3 437 2 B82778 cell cycle protein 31 38 54.3 505 2 B81021 conserved hypothet 32 38 54.3 505 2 C81965 hypothetical perip 33 38 54.3 699 2 AB3031 34 38 54.3 765 2 E98254 conserved hypothet 35 38 54.3 870 2 T39731 conserved hypothet 36 37.5 53.6 199 2 A33653 typothetical protein 37 52.9 176 2 F72563 typothetical protein 38 37 52.9 203 2 JC7521 maltose transport 40 37 52.9 337 2 D72690 hypothetical protein 41 37 52.9 483 2 F83205 typothetical protein 42 37 52.9 483 2 F83205 typothetical protein 43 37 52.9 706 2 S33761 typothetical protein 44 36 51.4 108 2 F72507 hypothetical protein 45 36 51.4 134 2 T45188 hypothetical protein 47 51.4 108 2 F72507 hypothetical protein 48 51.4 134 2 T45188</td></tenn></rey></rey>	submitted to the EMBL Data Library, March 1994 A;Reference number: G06820 A;Reference number: G06820 A;Recession: G01394 A;Status: preliminary; translated from GB/EMBL/DDBJ A;Mclecule type: mENDA A;Residues: 1-711 <cho> A;Cross-references: EMBL:U07643; NID:g467236; PIDN:AAB60324.1; PID:g467237 A;Rey, M.W.; Woloshuk, S.L.; deBoer, H.A.; Pieper, F.R. Nucleic Acids Res. 18, 5288, 1990 A;Title: Complete nucleotide sequence of human mammary gland lactoferrin. A;Reference number: S11228; MUID:90384839; PMID:2402455</cho>	RESULT 1 TPHUL lactotransferrin precursor [validated] - human N;Alternate names: lactoferrin C;Species: Homo sapiens (man) C;Accession: G01394; S11228; Ā45401; S10324; S15853; S20841; S07160; A61169; A31000; S74	30 38 54.3 437 2 B82778 cell cycle protein 31 38 54.3 505 2 B81021 conserved hypothet 32 38 54.3 505 2 C81965 hypothetical perip 33 38 54.3 699 2 AB3031 34 38 54.3 765 2 E98254 conserved hypothet 35 38 54.3 870 2 T39731 conserved hypothet 36 37.5 53.6 199 2 A33653 typothetical protein 37 52.9 176 2 F72563 typothetical protein 38 37 52.9 203 2 JC7521 maltose transport 40 37 52.9 337 2 D72690 hypothetical protein 41 37 52.9 483 2 F83205 typothetical protein 42 37 52.9 483 2 F83205 typothetical protein 43 37 52.9 706 2 S33761 typothetical protein 44 36 51.4 108 2 F72507 hypothetical protein 45 36 51.4 134 2 T45188 hypothetical protein 47 51.4 108 2 F72507 hypothetical protein 48 51.4 134 2 T45188

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A;Note: sequence extracted from NCBI bank;Lydon, J.P.; O'Malley, B.R.; Saucedo,
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(;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication; glycoprotein; iron binding; milk
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-711/Product: lactotransferrin #status experimental <MAT>
F;21-356/Domain: transferrin repeat homology <TRH1>
F;360-699/Domain: transferrin repeat homology <TRH2>
F;360-699/Domain: transferrin repeat homology <TRH2>
F;360-699/Binding site: carbohydrate (Asn) (Covalent) #status experimental
F;157,498/Binding site: carbohydrate (Asn) (Covalent) #status experimental
F;368-400,378-391,425-706,447-669,479-554,513-527,524-537,647-652/Disulfide bonds: #status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Note: this is the final paper in a series R;Houen, G.; Hoegdall, E.V.; Barkholt, V.; Norskov, L. Eur. J. Biochem. 241, 303-308, 1996
A;Title: Lactoferrin: similarity to diamine oxidase and A;Reference number: S74119; MUID:97054624; PMID:8898921
A;Accession: S74119
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A;Title: Human lactorransferrin: amino acid sequence and A;Reference number: A31000; MUID:85076667; PMID:6510420
A;Accession: A31000
                                                                                                                                                                                                                                                                                   A;Reference number: A45543; MUID:92367939; PMID:1503259
A;Accession: A45543
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A;Residues: 'G',23-24,'R',26-27,'XX',30-32 <HOU>
A;Experimental source: neutrophil granulocytes
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A; Molecule type: mRNA
A; Residues: 436-487; A; 489-711 < RAD>
A; Cross-references: EMBL.M18642; NID: g186815; PIDN: AAA86665.1; PI
R; Panella, T.J.; Liu, Y.; Huang, A.T.; Teng, C.T.
Cancer Res. 51, 3037-3043, 1931
A; Title: Polymorphism and altered methylation of the lactoferrin
A; Reference number: A61169; MUID: 91235214; PMID: 1674448
                           A;Experimental source: mammary gland
A;Experimen
                                                                                                                                                                                                                                                                                                                                                                                        R;Alexander, L.J.; Levine, W.B
Anim. Genet. 23, 251-256, 1992
A;Title: Cloning and sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   lactoferrin precursor - pig
C;Species: Sus scrofa domestica (domestic pig)
C;Date: 17-Feb-1994 #sequence revision 17-Feb-1994 #text_change
C;Accession: A45543; S24173
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A;Residues: 20-140,142-169,171-203,'L',205,'K',207-208,'K',210-385,'Q',387-391,'W',393
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Blood 70, 989-993, 1987
A;Title: Isolation of lactof
A;Reference number: S07160;
A;Accession: S07160
                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-703 < ALE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A45543
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Best Local S
Matches 13
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ilarity 100.0%;
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Pred. No. 0.00016;
0; Mismatches 0;
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D.R.; Conneel
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N;Alternate names: lactorerrr...
(cattle)
C;Species: Bos prinigenius taurus (cattle)
C;Species: Bos prinigenius taurus (cattle)
C;Date: 31-Mar-1992 #sequence revision 21-Nov-1997 #text_change 11-May-2000
C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S14674; S14110; S18517; JT0595; S13097; S18518; S13881; PL0148; C;Accession: I45919; S18518; S18518; S18818; S1
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A,Experimental source: mammary gland
A,Experimental source: mammary gland
C,Superfamily: transferrin; tron; iron binding; metalloprotein; milk
C,Superfamily: transferrin; iron; iron binding; metalloprotein; milk
F,1-19/Domain: signal sequence #status predicted <SIG-
F,20-703/Product: lactoferrin repeat bomology <TRH1>
F,20-350/Domain: transferrin repeat homology <TRH2>
F,36-49/Region: antimicrobial
F,36-49/Region: antimicrobial
F,36-69/Domain: transferrin repeat homology <TRH2>
F,36-61/Domain: transferrin repeat homology <TRH2>
F,36-62/Beinding site: iron (Asp, Tyr, Tyr, His) #status predicted
F,405/447,540,609/Binding site: carbonate (Arg) #status predicted
F,409/Binding site: carbonate (Arg) #status predicted
F,490/Binding site: carbonate (Arg) #status predicted
F,490/Binding site: carbonate (Arg) #status predicted
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A;Residues: 1-144,'V',146-163,'PP',166-339,'A',341-438,'Y',440-513,'R',515-708
A;Residues: EMBL:X57084; NID:9505; PIDN:CDA40366.1; PID:9506
R;Pierce, A.; Colavizza, D.; Benaissa, M.; Maes, P.; Tartar, A.; Montreuil, J.;
Eur. J. Biochem. 196, 177-184, 1991
A;Title: Molecular cloning and sequence analysis of bovine lactotransferrin.
A;Reference number: S14110; MUID:91160550; PMID:2001696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Accession: I45919; S14674; $\tilde{S}14110; S18517; JT0595 R;Tsang, T.C.; Burns, D.K.; Wang, F.; Pan, Y. FASEB J. 6, 233, 1991 A;Title: Cloming of a 80-kD advanced glycosylation A;Reference number: I45919
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A;Residues: 1-11,'W',13-50,'I',52-84,'G',86-120,'L',121-130,'I'
A;Cross-references: EMBL:M92089; NID:g164613; PIDN:AAA31102.1;
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A,Title: Nucleotide and primary amino acid
A;Reference number: S24173; MUID:92379101;
A;Accession: S24173
                                                                                                                                        Biochem. Biophys. Res. Commun. 180, 75-84, 1991
A;Title: Bovine lactoferrin mRNA: sequence, and
A;Reference number: JT0595; MUID:92028986; PMID
A;Accession: JT0595
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A;Accession: S14674
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A,Molecule type: mRNA
A,Residues: 1-708 <TSA>
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                                        A; Molecule type: mRNA
A; Residues: 1-65, 'PG'
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R; Goodman, R.E.; Schanbacher, F.
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A; Residues: 20-35;82-114;148-163,'PP',166-178,'V','P';183-190;205-212;230-239;304-339;59
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A; Residues: 3-144,'V',
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G',68-296,'S'
GB:M63502
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83.3%;
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Pred. No. 0.02
2; Mismatches
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                                                                                                                                                                                                , analysis, and PMID:1718281
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PID:g164614
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S21

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A; Molecule type: protein
A; Residues: 20-25;302-308;359-366, 'X',368-376, 'X',378 <SHI>
A; Residues: 20-25;302-308;359-366, 'X',368-376, 'X',378 <SHI>
C; Superfamily: transferrin; transferrin repeat homology
C; Keywords: duplication; glycoprotein; iron; iron binding; metalloprotein;
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-708/Product: lactotransferrin #status experimental <MAT>
F;30-355/Domain: transferrin repeat homology <TRHI>
F;36-60/Region: antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F;359-696/Domain: transferrin repeat homology <TRH2>
F;28-64,134-217,176-192,179-200,189-202,250-264,367-399,377-390,424-703,444-666,476-551
F;38-55/Disulfide bonds: #status predicted
E;79,111,211,272/Binding site: iron (Asp, Tyr, Tyr, His) #status experimental
F;140/Binding site: carbonate (Arg) #status experimental
F;240/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;252,300,387,495,564/Binding site: carbohydrate (Asn) (covalent) #status predicted
F;414,452,545,614/Binding site: iron (Asp, Tyr, His) #status experimental
F;482/Binding site: carbonate (Arg) #status experimental
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A;Residues: 36-60 <BEL>
A;Residues: 36-60 <BEL>
R;Shimazaki, K.; Tanaka, T.; Kon, H.; Oota, K.; Kawaguchi, A.; Maki, Y.; Sato, J. Dairy Sci. 76; 946-955, 1993
A;Title: Separation and characterization of the C-terminal half molecule of both Reference number: A56659; MUID:93253156; PMID:8486845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Molecule type: protein
A;Residues: 20-27,'X',29-37,'X',39-54,'X',56-59 <REJ>
A;Residues: 20-27,'X',29-37,'X', 39-54,'X', 56-59 <REJ>
R;Bellamy, W:, Takase, M.; Yamauchi, K.; Wakabayashi, H.; Kawase,
Biochim. Biophys. Acta 1121, 130-136, 1992
A;Title: Identification of the bactericidal domain of lactoferrin.
A;Reference number: S21756; MUID:92287941; PMID:1599934
A;Accession: S21756
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Rejman, J.J.; Hegarty, H.M.; Hurley, W.L. Comp. Biochem. Physiol. B 93, 929-934, 1989
A;Title: Purification and characterization of bovine lactoferrin from secretions of the A;Reference number: PLO148; MUID:90031466; PMID:2805645
A;Accession: PL0148
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A;Residues: 28-38,'P',40-86,'C',88-708 <ME3>
A;Cross-references: EMBL:X54801
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A;Accession: S13097
A;Molecule type: mRNA
A;Residues: 28-33,'DS',36-38,'P',40-708 <MEA>
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A; Residues: 20-47;59-66;132-139;256-277;278,305-332;343-351;361-363;586,587-589;598-619
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                                                                                                                                                                         lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 10
;Accession: JC2323
;Le Provost, F.; Nocart, M.; Guerin, G.; Martin, P.;
iochem. Biophys. Res. Commun. 203, 1324-1332, 1994
;Title: Characterization of the goat lactoferrin cDNA:
                                                                                                              ;Species: Capra aec;
Date: 20-Feb-1995
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                                                                                                           aegagrus hircus (domestic goat)
995 #sequence_revision 20-Feb-1995 #text_change
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Pred. No.
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0.11;
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     assignment of
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        locus
     A;Cross-references: EMBL:U36916; NID:g1016329; PIDN:AAB58956.1; PID:g1016330 C;Genetics:
                                                       A;Status: preliminary; translated
A;Molecule type: mRNA
A;Residues: 1-704 <ROU>
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A;Molecule type: mRNA
A;Residues: 3-707 <PRIN
A;Residues: 3-707 <PRIN
A;Cross-references: EMBL:J03298
B;Liu, Y.; Teng, C.T.
J. Biol. Chem. 266, 21880-21885, 1991
J. Biol. Chem. 266, 21880-21885, 1991
A;Title: Characterization of estrogen-responsive mouse lactoferrin
A;Reference number: A41205, MUID:92042099; PMID:1939212
A;Accession: A41205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Reference number: JC2323; MUID:94380047; PMID:8093048
A;Accession: JC2323
A;Molecule type: mRNA
A;Residues: 1-708 <LEP
C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication; glycoprotein
F;359-656/Domain: transferrin repeat homology <TRH2>
F;252,300,387,495,564/Binding site: carbohydrate (Asn)
                                                                                                                carbonic anhydrase II inhibitor (transferrin homolog) precursor ()Species: Sus scrofa domestica (domestic pig) (C.Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 20 C.Date: 21-Feb-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M74778
G;Superfamily: transferrin; glycoprotein
C;Keywords: duplication; glycoprotein
C;Keywords: duplication; glycoprotein
F;1-19/Domain: signal sequence #status predicted <SIG-
F;1-19/Domain: lactotransferrin #status predicted <MAT-
F;20-707/Product: lactotransferrin repeat homology <PRM2-
F;358-695/Domain: transferrin repeat homology <PRM2-
F;494/Binding site: carbohydrate (Asn) (covalent) #status:
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J. Biol. Chem. 262, 10134-10139, 1987
A;Title: Lactotransferrin is the major estrogen inducible A;Reference number: A92596; MUID:87280033; PMID:3611056
A;Accession: A28438
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C;Species: Mus musculus (house mouse)
C;Date: 10-Sep-1999 #sequence_revision
C;Accession: A28438; A41205
Biochemistry 31, 12536-12542, 1992
A;Title: Puilfication and characterization
A;Reference number: I47228; MUID:93099129;
A;Accession: I47228
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                                                                                          R; Roush,
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A; Residues: 1-15 <LIU>
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                                                                    E.D., Fierke, C.A.
stry 31, 12536-12542, 1992
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1; Mismatches
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Pred. No. 0.24;
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Pred. No. 0.16;
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from

GB/EMBL/DDBJ

of a carbonic PMID:1463741

anhydrase

II inhibitor from

gog

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A;Molecule type: protein
A;Residues: 20-28; X',30-38, X',40-43, 'S' <CHU>
A;Residues: 20-28; Milliams, J.
R;Kingston, I.B.; Milliams, J.
Biochem. J. 147, 463-472, 1975
A;Title: The amino acid sequence of a carbohydrate-containing
A;Reference number: A90282; MUID:76039467; PMID:1172663
A;Accession: A90282
A;Molecule type: protein
                                                                                                                                                                                                                                                                  A;Residues: 20-28,'X',30-38,'X',40-44 <GEN>
R;Chung, M.C.M.; Chan, S.L.; Shimizu, S.
Int. J. Biochem. 23, 609-616, 1991
A;Title: Purification of transferrins and lactoferrin using A;Reference number: A61573; MUID:91293379; PMID:2065820
A;Accession: B61573
                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Reference number: A40674; MUID:93328771; PMID:8393014
A;Accession: A40674
A;Molecule type: protein
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A;Residues: 1-50;46-82; V',84-92;102-146;162-168;170-228;241-283;289-333;338-344;350-351
A;Residues: 1-50;46-82; V',84-92;102-146;162-168;170-228;241-283;289-333;338-344;350-351
R;Gentil:, C:; Bianco, P.; Neri, M.; Malpeli, M.; Campanile, G.; Castagnola, P.; Cancedo
J. Cell Biol. 122, 703-712, 1993
A;Title: Cell proliferation, extracellular matrix mineralization, and ovotransferrin tra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Molecule type: protein
A;Residues: 1-23 <THI>
R;Williams, J.; Elleman, T.C.; Kingston, I.B.; Wilkins,
R;Williams, T.; Elleman, T.C.; Kingston, I.B.; Wilkins,
R;Tille: The primary structure of hen ovotransferrin.
A;Reference number: A91116; MUID:82138852; PMID:6895872
A;Accession: A91116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Note: the codons given for residues 132 (AAC) and 317 R;Thibodeau, S.N.; Lee, D.C.; Palmiter, R.D. J. Biol. Chem. 253, 3771-3774, 1978 A;Title: Identical precursors for serum transferrin and A;Reference number: A92229; MUID:78171533; PMID:649604 A;Accession: A92229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Jeltsch, J.M.; Chambon, P.
Eur. J. Biochem. 122, 291-295, 1982

Bur. H. Biochem. 122, 291-295, 1982

A;Title: The complete nucleotide sequence of the chicken ovotransferrin mRNA

A;Reference number: A91115; MUID:82138851; PMID:7060577

A;Accession: A91115
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C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication
F;20-350/Domain: transferrin repeat homology <TRH1>
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A;Residues: 1-82,'V',84-99,'I',101-153,'W',155-238,'LN',241-685,'N',687-705
A;Cross-references: EMBL:X02009
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A; Residues: 1-705 < JE1>
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Best Local
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Pred. No.
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                 RESULT
A59311
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C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000 (;Accession: G83500 R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hicladman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Lari, Lory, S.; Olson, M.V.
                                                                                                                                                                                                               A;Gene:
C;Superf
                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Complete genome sequence of Pseudomonas aeruginosa PA01, A;Reference number: A82950; MUID:20437337; PMID:10984043 A;Accession: G83500
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F;21-355/Domain: transferrin repeat homology <TRH1>
F;35-592/Domain: transferrin repeat homology <TRH2>
F;35-692/Domain: transferrin repeat homology <TRH2>
F;35-64,134-216,179-193,190-201,247-261,367-399,424-699,440-662,473-549,497-690/Disulfide F;29-55,377-390,589-603/Disulfide bonds: #status predicted F;49-2/Binding site: carbbydrate (Asn) (covalent) [partial] #status experimental F;492/Binding site: carbbydrate (Asn) (covalent) [partial] #status predicted
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C;Comment: Ovotransferrin has a bacteriostatic function. Its concentration in avian egg v C;Comment: Plasma apotransferrin promotes the oxidation of ferrous ions, which would othe C;Comment: In electrophoretic and genetic studies, transferrin shows strong polymorphism.
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Biochem. J. 251, 849-855, 1988
A;Title: The dimerization of half-molecule fragments of A;Reference number: S02476; MUID:88326225; PMID:3415649
A;Accession: S02476
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R;Elleman, T.C.; Williams, J.
Biochem. J. 116, 515-532, 1970
A;Title: The amino acid sequences of cysteic acid-containing
A;Reference number: A90246; MUID:70141846; PMID:4907959
A;Reference number: A90246; MUID:70141846; PMID:4907959
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A;Residues: 1-383 <5TO-2
A;Cross-references: GB:AE004546; GB:AE004091; NID:g9947079; PIDN:AAG04551.1;
A;Experimental source: strain PAO1
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C;Species: Pseudomonas aeruginosa
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Ovotransferrin (conalbumin) and transferrin have identical protein
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8; Conserva
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                                                   ARRARVVWCAVGE 13
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Pred. No. 6.
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thiol-disulfide interchange protein dsbC homolog NMB0550 [Imported] - Neisseria mening C;Species: Neisseria meningitidis
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 02-Feb-2001
C;Accession: B81185; D81916
R;Tettelin, H; Saunders, N.J; Heidelberg, J; Jeffries, A.C.; Nelson, K.E.; Eisen, J Hickey, E.K.; Haft, D.H.; Salzberg, S.L.; White, O.; Fleischmann, R.D.; Dougherty, B.A. Fi, H.; Vin, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani, V.; Pizza, M. Science 287, 1809-1815, 2000
Science 287, 1809-1815, 2000
A;Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.; Rappuoli, R.;
A;Title: Complete genome sequence of Neisseria meningitidis serogroup B strain MC58.
A;Reference number: A81000; MUID:20175755; PMID:10710307
                                                             RESULT
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A;Cross-references: GB:AL162754;
A;Experimental source: serogroup
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A;Experimental source: serogroup B, strain MC58
R;Parkhill, J.; Achtman, M.; James, K.D.; Bentley, S.D.; Churcher, C.; Klee, S.R.; Morel; Holroyd, S.; Jagels, K.; Leather, S.; Moule, S.; Mungall, K.; Quail, M.A.; Rajandream, Nature 404, 502-506, 2000
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A;Cross-references: GB:AF147738; NID:g4885025; PIDN:AAD31926.1; PID:g4885026
A;Experimental source: cultivar B73 inbred line
C;Genetics:
              hypothetical protein SCH69.07c - Streptomyces coelicolor C; Species: Streptomyces coelicolor
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C;Species: Zea mays (maize)
C;Date: 09-Jun-2000 #sequence_revision
C;Accession: A59311
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A;Residues: 1-260 <TET>
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A; Accession: A59311
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Best Local S
Matches 5
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72.7%;
                                                                                                                                                                                                                                                                                                                                                                      GB:AL157959; NID:g7379424; PIDN:CAB84014.1; PID:g737945
A, strain Z2491
                                                                                                                                                                                                                                                          Score 40;
Pred. No.
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Pred. No.
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Mismatches
                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                                                                                          DB
13;
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Lerty, B.A.
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A; Description C; Superfamily:
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              ;Description: catalyzes hydrolyzation;Superfamily: beta-fructofuranosidase
                                                             Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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YjeF family protein [imported] - Caulobacter crescentus
C;Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 10-May-2001
C;Accession: H87492
R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; He
B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft,
n, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; in
Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A;Title: Complete Genome Sequence of Caulobacter crescentus.
A;Reference number: A87249; MUID:21173698; PMID:11259647
A;Accession: H87492
A;Accession: H87492
A;Accession: H87492
                                                                                                                                                  C;Accession: T02260
R;Xu, J.; Almira, E.C.; Avigne, W.T.; McCarty, D.R.; Koch, submitted to the EMBL Data Library, July 1995
A;Description: Molecular characterization and differential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-483 <STO>
A;Residues: 1-509 <XUJ>
A;Cross-references: EMBL:U31451; NID:g951165; PIDN:AAA74584.1; PID:g951166
A:Evnerimental source: strain merit; root tip
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: CC1965
C;Superfamily: Thermotoga maritima hypothetical protein MTH1256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:AE005673; NID:gl3423428; PIDN:AAK23940.1; C;Genetics:
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C;Genetics:
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                                                                                                                        A; Accession: T02260
                                                                                                                                             A;Reference number: Z14645
                                                                                                                                                                                                                                            C;Species: Zea mays (maize)
C;Date: 05-Mar-1999 #sequence_revision 05-Mar-1999 #text_change
                                                                                                                                                                                                                                                                                             beta-fructofuranosidase (BC 3.2.1.26) - N;Alternate_names: invertase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: EMBL:AL079308; PIDN:CAB45204.1; GSPDB:GN00070; SCOEDB:SCH69.07c
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A; Residues: 1-436 < MUR>
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A; Accession: T36706
                                                                                               A;Status: preliminary; translated from GB/EMBL/DDBC
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58.3%;
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Pred. No. 23;
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Pred. No.
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aft, D.H.; Kolon
C.; Fraser, C.M.
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of.

terminal non-reducing

beta-D-fructofuranoside

C; Keywords: glycosidase; hydrolase

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RESULT 14
JC7906
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Search completed: September 1, 2004, 00:17:01 Job time: 8.54 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   hypothetical protein [imported] - Mycobacterium leprae
C;Species: Mycobacterium leprae
C;Species: Mycobacterium leprae
C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 20-Apr-2001
C;Accession: C87219
C;Accession: C87219
R;Cole, S.T.; Eiglmeier, K.; Parkhill, J.; James, K.D.; Thomson, N.R.; Wheeler, P.R.; Harlin, N.; Holroyd, R.; Davies, R.M.; Devlin, K.; Duthoy, S.; Feltwell, T.; Fraser, A.; Hamlin, N.; Holroyd, eam, M.A.; Rutherford, K.M.
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C87219
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A,Title: Molecular characterization of sucrose:sucrose 1-fructosyltransferase and sucrose A,Reference number: JC7905; MUID:22394650; PMID:12506964
A,Accession: JC7906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sucrose 1F-fructosyltransferase (EC 2.4.1.99) - wheat N;Alternate names: 1-SST; fructosyltransferase 2; Wft2 protein C;Species: Triticum aestivum (common wheat) C;Date: 03-Feb_2003 #sequence_revision 03-Feb-2003 #text_change 14-Apr-2003 C;Date: 03-Feb_2003 #sequence_revision 03-Feb-2003 #text_change 14-Apr-2003
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A;Residues: 1-129 <STO>
A;Cross-references: GB:AL450380; NID:gl3094034; PIDN:CAC31995.1; GSPDB:GN00147
                                                                                                                                                                                                                                                                                                                                                                                                      Nature 409, 1007-1011, 2001
A; Authors: Rutter, S.; Seeger, K.; Simon, S.; Simmonds, M.; Skelton, A; Title: Massive gene decay in the leprosy bacillus.
A; Reference number: A86909; MUID:21128732; PMID:11234002
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A;Residues: 1-662 <KAW>.
A;Residues: 1-662 <KAW>.
A;Cross-references: DDBJ:AB029888
C;Comment: This enzyme, which is a vacuole-type fructosyltransferase and a fructan-biosy
fers a fructosyl moiety from one sucrose to another, resulting in the formation of trisa
                                                                                                                                                                                                                                                               A; Gene: ML2478
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                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
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Best Local S
Matches 9
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Best Local Similarity
Matches 8; Conserv
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Pred. No. 24;
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Pred. No. 31;
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Maximum DB
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Perfect score:
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  Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                              Score
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seq length: 2000000000
  protein search, using
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Query
Match Length
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Gapop 10.0 , Gapext 0.5
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70
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TRFL PIG
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ICSA SCHPO
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 O9p2n4 homo sapien
P71901 mycobacteri
O66967 aquifex aeo
O9zdu3 rickettsia
P70795 agrobacteri
O92079 gadus morhu
P79815 oncorhynchu
P80426 salmo salar
P79819 oryzias lat
P80429 salmo salar
O921i1 mus musculu
P12346 rattus norv
Q29443 bos taurus
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P24627 bos taurus
Q29477 capra hircu
P08071 mus musculu
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Q29545 sus scrofa
P02789 gallus gall
P56410 anas platyr
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ALIGNMENTS

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C.-I. FUNCTION: LACTOFERROXIN A, B AND C HAVE OPIOID ANTA ACTIVITY. LACTOFERROXIN A, B AND C HAVE OPIOID ANTA ACTIVITY. LACTOFERROXIN A, B AND C HAVE OFFICE DEGREES OF FOR KAPPA-RECEPTORS THAN FOR MU-RECEPTORS.
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expressed in Aspergillus
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                                                                                                             EMBL; AJ005203; CAA06441.1;

PDB; 1CE2; 19-MAR-99.

PDB; 1DIY; 13-JAN-99.

InterPro; IPR001156; Transferrin.

Pfam; pF00405; transferrin; 2.

PRINTS; pR00422; TRANSFERRIN.

SMART; SM00094; TR FER; 2.

PROSITE; PS00205; TRANSFERRIN 1; 2.

PROSITE; PS00205; TRANSFERRIN 2; 2.

PROSITE; PS00207; TRANSFERRIN 2; 2.

PROSITE; PS00207; TRANSFERRIN 3; 2.

Transport; IIon transport; Glycoprotein; Me
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.

Paramasivam M., Thattaliyath B.D., Kumar A., S Singh T.P.,

"cDNA sequence of Buffalo lactoferrin.";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bubalus bubalis (Domestic water buffalo).

Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Cetarriodactyla; Ruminantia; Pecora; Bovoidea;

Bovidae; Bovinae; Bubalus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.5 ANGSTROMS).
MEDLINE=20003130; PubMed=10531476;
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15-JUL-1999 (Rel. 38, Last sen
10-OCT-2003 (Rel. 42, Last ann
Lactotransferrin precursor (La
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60 ARRARVVWCAVGE 372
; 3D-structure.

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ID 176 192

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ID 189 200
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Pred. No. 0.00041;
0; Mismatches 0;
                                                                                                                                                                      Length 708;
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AC 077811;
AC 077811-1999 (Rel. 38, Created DT 15-JUL-1999 (Rel. 38, Last sc DT 10-OCT-2003 (Rel. 42, 
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J. Mol. Biol. 289:303-317(1999).
-!- FUNCTION: TRANSFERRINS ARE IRON BIN CAN BIND TWO ATOMS OF FERRIC IRON I OF AN ANION, USUALLY BICARBONATE.
-!- SUBCELLULAR LOCATION: Secreted.
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PDB; 187Z; 02-FEB-99.
PDB; 1F9B; 10-FEB-01.
PDB; 116B; 13-FEB-02.
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PROSTIE; PS00205; TRANSFERRIN.
PROSTIE; PS00206; TRANSFERRIN.
PROSTIE; PS00207; TRANSFERRIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AJ010930; CAA09407.1; -. PDB; 1B1X; 02-DEC-98.
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Paramasivam M., Srinivasan A., Yadav M.P., Singh T.P.;

"CDNA sequence of mare lactoferrin.";

Submitted (SEP-1998) to the EMBL/GenBank/DDBJ database.
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Mammalla; Eutheria; Perissodactyla; Equidae; Equus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sharma A.K., Paramasivam M., Srinivasan A., Yadav M.P., Singh T.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUL-1999 (Rel. 38, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Lactotransferrin precursor (Lactoferrin) (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- DOMAIN: Composed of two homologous domains.-!- SIMILARITY: Belongs to the transferrin family.
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                                                                                                                                                                                  TRFL_PIG :
P14632; Q29557;
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                                                                                             1 ARRARVVWCAVG 12
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l Similarity 91.7%;
ll; Conservative
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             STANDARD;
                                                                                                                                                                                     357
                                                                                                                                Score 60; DB 1;
Pred. No. 0.0032;
0; Mismatches
                PRT;
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15-DEC-1998
10-CCT-2003
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REPEAT
                                                                                                                                                                                                                                                                               Signal
SIGNAL
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Hutchens T.W., Magnuson J.S., Yip T.-T.;
"Rapid purification of porcine colostral whey lactoferrin by affinity chromatography on single-stranded DNA-agarose. Characterization, chromatography on single-stranded DNA-agarose.";
amino acid composition and N-terminal amino acid sequence.";
Biochim. Biophys. Acta 999:323-329(1989).
-i- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH
-i- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH
CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING
                                                                                                                                                                                                                                                                                                                                       PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1;
PROSITE; PS00206; TRANSFERRIN_2;
PROSITE; PS00207; TRANSFERRIN_3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATI OF AN ANION, USUALLY BICARBONATE.

-!- SUBUNIT: Monomer.

-!- SUBCELLULAR LOCATION: Secreted.

-!- DOMAIN: Composed of two homologous domains.

-!- SIMILARITY: Belongs to the transferrin family.
                                                                                                                                                                                                                  REPEAT
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EMBL, M81327; AAA31059.1; -.
PIR; A45543; A45543.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Alexander L.J., Levine W.B., Teng C.T., Beattie C.W.; "Cloning and sequencing of the porcine lactoferrin cDNA."; Anim. Genet. 23:251-256(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement
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Lyndon J.P., O'Malley B.R., Sauce
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL
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(Rel. 42,
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s. Acta 1132;97-99(1992).
                                                                                                                                                                                                                                                                                                                     transport;
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. 42, Last annotation updat
precursor (Lactoferrin).
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    Chordata; Craniata; Vertebrata;
Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Created)
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(See http://www.isb-sib.ch/announce/
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                                         SEQUENCE FROM N.A.
STRAINS-Somali; TISSUB-Lactating mammary gland;
Kappeler S.R., Ackermann M., Farah Z., Puhan Z.;
"Sequence analysis of camel (Camelus dromedarius)
Int. Dairy J. 9:481-486(1999).
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SEQUENCE FROM N.A. TISSUE=Mammary gla
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Mammalia; Eutheria;
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               land;
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 Sahani M.S.,
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Singh T.P.;
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Signal; 3D-structure.

SIGNAL 1 19

CHAIN 20 708

REPEAT 20 708

REPEAT 364 708

DISULFID 28 64

DISULFID 134 217

DISULFID 176 192

DISULFID 367 399

DISULFID 474 666

DISULFID 476 551

DISULFID 476 694

DISULFID 510 524

DISULFID 521 634

DISULFID 521 634

DISULFID 644 649

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METAL 211 211

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-- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROT
-- CAN BIND TWO ATOMS OF FERRIC IRON 11 ASSOCIATION WITH
-- OF AN ANION, USUALLY BICARBONATE (BY SIMILARITY).

-- SUBGULIULAR LOCATION. Secreted.

-- DOMAIN: Composed of two homologous domains.
  CARBOHYD
CARBOHYD
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                                                                                                                                                          BINDING
                                                                                                                                                                                                                                                      METAL
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Pfim; PF00405; transferrin; 2.
PRINTS; PR0042; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
Transport; Iron transport; Glycoprotein; Metal-binding; Repeat;
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EMBL; AF165879; AAF82241.1; -.
PDB; 1DTZ; 20-JUN-01.
InterPro; IPR001156; Transferrin
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Tsang T.C., Burns D.K., Wang F
"Cloning of a 80-kD advanced g
protein from bovine lung.";
FASEB J. 6:233-233(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bos taurus (Bovine).
Eukaryota; Metazoa; C
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BOVIN STANDARD; PRT; 708 AA.

TRFL BOVIN STANDARD; PRT; 708 AA.

01-MAR-1992 (Rel. 21, Created)
01-OCT-1993 (Rel. 27, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Lactotransferrin precursor (Lactoferrin) [Contains: Lactoferricin (LECIN B)].
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Nakamura
                                                                                                                         TISSUE=Blood, and Mammary gland;
MEDLINE=94286164; PubMed=8206385;
Seyfert H.-M., Tuckoricz A., Interthal H., Koczan D., Hobom G.;
"Structure of the bovine lactoferrin-encoding gene and its promoter.";
Gene 143:265-269(1994).
SEQUENCE OF 20-59.

MEDLINE=90031466; PubMed=2805645;

Rejman J.J., Hegarty H.M., Hurley W.L.;

"Purification and characterization of bovine lactoferrin from secretions of the involuting mammary gland: identification of multiple molecular weight forms.";
                                                                                                                                                                                                                                                                                  mammary gland.";
Biochem. Biophys. Res.
                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                   MEDLINE=92028986; PubMed=1718281; Goodman R.E., Schanbacher F.L.;
                                                                                                                                                                                                                                                                                                                                                               Pierce A., Colavizza D., Benaissa M., Mae
Montreuil J., Spik G.;
"Molecular cloning and sequence analysis
Eur. J. Biochem. 196:177-184(1991).
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TISSUE=Submaxillary
MEDLINE=91160550; Pu
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lactoferrin mRNA: sequence,
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PubMed=2001696;
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1; Mismatches
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LLS -> PLF (IN REF. 2).
L -> F (IN REF. 2).
R -> Q (IN REF. 2).
R -> Q (IN REF. 2).
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EMBL; AB046664; BAB03470

PIR; I45919; TFBOL.

PDB; 11E7; 03-DEC-97.

PDB; 11E7; 18-NOV-98.

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"Three-dimensional solution structure of lactoferricin B, an
antimicrobial peptide derived from bovine lactoferrin.";
Biochemistry 37:4288-4298(1998).

-i- FUNCTION: TRANSFERRING ARE IRON BINDING TRANSPORT PROTEINS WHICH
CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING
OF AN ANION, USUALLY BICARBONATE.

-i- FUNCTION: LACTOFERRICIN B IS AN ANTIMICROBIAL PEPTIDE.
-i- SUBURLULUAR LOCATION: Secreted.
-i- SUBCELLULAR LOCATION: Secreted.
-i- DOMAIN: Composed of two homologous domains.
-i- SIMILARITY: Belongs to the transferrin family.
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'fiam; pF00405; transferrin; 2.
'PRINUS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
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K63502; AAA30617.1; -...

L; L108604; AAA30609.1; -...

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L; L19982; AAA21722.1; JOINED.

L; L19983; AAA21722.1; JOINED.

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L; L19986; AAA21722.1; JOINED.

L; L19989; AAA21722.1; JOINED.

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MEDINE=94380041; pubMed=8093048;

Ale Provost F., Nocart M., Guerin G., Martin P.;
Characterization of the goat lactoferrin cDNA. Assignmen relevant locus to bowine U12 synteny group.";
Biochem. Biophys. Res. Commun. 203:1324-1332(1994).
-1- FUNCTION: TRANSFERRINS ARE IKON BINDING TRANSPORT PROCAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH CAN BUILD WATOMS OF FERRIC STON IN ASSOCIATION WITH SUBURIT: MONOMER (By similarity).
-1- SUBURIT: MONOMER (By similarity).
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Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
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PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
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PROSITE; PS00207; TRANSFERRIN 3; 2.
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EMBL; X78902; CAA55517.1; -.
HSSP; C77698; 1CE2.
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Bovidae; Caprinae;
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Mammalia; Eutheria; Cetartioda
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Lee T., Yu S., Kim S.,
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o the EMBL/GenBank/DDBJ databases.
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C P08071; P70690; Q61799; Q922P2;

DT 10-AUG-1988 (Rel. 40, Created)

DT 28-FBB-2003 (Rel. 41, Last sequence update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)

DT 10-OCT-2003 (Rel. 42, Last annotation update)
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TISSUE=Uterus;
MEDLINE=87280033; PubMed=3611056;
Pentecost B.T., Teng C.T.;
"Lactotransferrin is the major estrogen inducible
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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RA Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsleh F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Hsleh F.,
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RA Hopkins R.M., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Stapleton M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA RAHA S.S., Loquellano N.A., Peters G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
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Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
Van Hollon J.W., Green E.D., Dickson M.C.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Hopkins R.W., Touchman J.W., Green E.D., Dickson M.C.,
Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.",

"Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences.",

"A Proc. Natl. Acad. Sci. U.S.A. 99:16899-16903 (2002).
                                                                                                                                                                           PRINTS; PRO0422; TRANSFERKIN.

PRINTS; PRO0422; TR_FER; 2.

SMART; SM00094; TR_FER; 2.

PROSITE; PS00205; TRANSFERRIN_2; 2.

PROSITE; PS00206; TRANSFERRIN_3; 2.

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EMBL; BC006504; AAA106504.1; -.
EMBL; M74778; AAA39427.1; -.
HSSP; P02788; 1CB6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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-i- PUNCTION: TRANSFERRIKS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- SUBUNIT: Monomer.
-!- SUBCELLUTAR LOCATION: Secreted.
-!- DOMAIN: Composed of two homologous domains.
-!- SIMILARITY: Belongs to the transferrin family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      uterine secretions.";
J. Biol. Chem. 262:10134-10139(1987)
                                                                                                 REPEAT
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SEQUENCE FROM N.A., AND PARTIAL SEQUENCE.
MEDLINE=97254619; PubMed=9100029;
Muebbens M.W., Roush E.D., Decastro C.M., Fierke C.P.
"Cloning, sequencing, and recombinant expression of inhibitor of carbonic anhydrase: a novel member of t
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Mammalia; Eutheria;
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Cetartiodactyla;
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S-> I (IN REF. 2).
S-> I (IN REF. 2).
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actyla; Suina; Suidae; Sus.
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SEQUENCE
          Eur. J.
[2]
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                              mRNA.
                                       SEQUENCE FROM N.A.
MEDLINE=82138851; PubMed=7060577;
Jeltsch J.-M., Chambon P;
"The complete nucleotide secuence
                                                                                                                                                                                                                                                                                                                                                                                                SMART; SM00094; TR FER; 2.

PROSITE; PS00205; TRANSFERRIN_1; 2.

PROSITE; PS00206; TRANSFERRIN_2; 1.

PROSITE; PS00207; TRANSFERRIN_3; 2.
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SIGNAL
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SEQUENCE
                                                                                          NCBI_TaxID=9031;
                                                                                                               Archosauria;
                                                                                                                                   Gallus gallus
                                                                                                                                                       Ovotransferrin precursor (Conalbumin)
                                                                                                                                                                                                 P02789;
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                                                                                                                                             (Serum transferrin)
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SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Plasma.
PIM: N-glycosylated.
SIMILARITY: Belongs to the transferrin family.
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S; PR00422; TRANSFERRIN.
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(Rel. 33, Last sequence up
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77.8%;
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Pred. No. 1.1;
2; Mismatches
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INHIBITOR OF CARBONIC ANHYDRASE.
N-LINKED (GLCNAC. . .) (POTENTIA),
16BB0E651931E336 CRC64;
                                                                                                              Craniata; Ver; Galliformes;
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MEDLINE=94032327; PubMed=8218271;
Dewan J.C., Mikami B., Hirose M., Sacchettini J.C.;
"Structural evidence for a pH-sensitive dilysine tri
ovotransferrin N-lobe: implications for transferrin
Eigenhemistry 32:11963-11968(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Egg white, and Serum;
MEDLINE=78171533; PubMed=649604;
Thibodeau S.N., Lee D.C., Palmiter R.D.;
"Identical precursors for serum transferrin conalbumin.";
  MEDLINE=99428516; |
Kurokawa H., Dewan
                                                                                                                                                                                                                             "Change in glycosylation of chicken during embryogenesis and primary cu. Glycobiology 4:617-624(1994).
                                                                                                                                                                                                                                                                 Jacquinot P.M., Leger Montreuil J., Spik G.
                                                                                                                                                                                                                                                                                                                                            ovotransferrin.";
                                                                                                                                                                                                                                                                                                                                                         "Investigation by 360-MHz and methylation analysis c
                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-87190419; PubMed=3032619;
Crichton R.R., Charloteaux-Wauters
"Iron transport and storage.";
Eur. J. Biochem. 164:485-506(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Elleman T.C., Williams J.;
"The amino acid sequences of cysteic acid-containing performic acid-oxidized ovotransferrin.";
Biochem. J. 116:515-532(1970).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 480-582.
MEDLINE=76039467; PubMed=1172663;
Kingston I.B., Williams J.;
"The amino acid sequence of a car
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=88015626; PubMed=3658709;
Jeltsch J.-M., Hen R., Maroteaux
"Sequence of the chicken ovotrans
Nucleic Acids Res. 15:7643-7645(1
                          X-RAY CRYSTALLOGRAPHY (3.0 ANGSTROMS).
                                                                         "Crystal
                                                                                        Kurokawa
                                                                                                    MEDLINE=96083822;
                                                                                                                X-RAY CRYSTALLOGRAPHY (2.4
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Elleman T.C., Will
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Williams J., Elleman T.C., Kingston I.B., Wilki:
"The primary structure of hen ovotransferrin.";
Eur. J. Biochem. 122:297-303(1982).
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                                                                           H., Mikami B. structure of
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Res. 15:7643-7645(1987).
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 PubMed=10497206;
n J.C., Mikami B.,
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kamp J., Vliegenthart J.F., Spik G.,
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PDB; 1LT4; 19-SEP-01.
PDB; 1NTT; 29-DEC-99.
PDB; 1TFA; 29-DEC-99.
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PROSITE; PS00205; TRANSFERRIN 2; 2.
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FUNCTION: TRANSFERRIN HAS A BACTERIOSTATIC FUNCTION. ITS
CONCENTRATION IN AVIAN EGG IS THE HIGHEST CONCENTRATION OF ANY
TRANSFERRIN IN VIVO. TRANSFERRIN IN LIVER IS REGULATED BY THE IRON
LEVELS BUT NOT IN THE OVIDUCT. THESE TWO FORMS OF TRANSFERRIN
(LIVER AND OVIDUCT) DIFFER ONLY BY THEIR CARBOHYDRATE COMPOSITION.
SUBCULTULAR LOCATION: Secreted.
SUBCULTULAR LOCATION: Secreted.
DOWAIN: Composed of two homologous domains.
ALLERGEN: Causes an allergic reaction in human.
SIMILARITY: Belongs to the transferrin family.
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                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.35 ANGSTROMS).
Rawas A., Multhead H., Williams J.;
"Structure of diferric duck ovotransferrin
Acta Crystallogr. D 52:631-640(1996).
                                                                                                                                                                                                        Archosauria; Aves; Neognathae; NCBI_TaxID=8839;
                                                                                                                                                                                                                                                                                                       P56410;
lobes are in the open form.";

Acta Crystallogr. D 53:464-468(1997).

-! FUNCTION: Transferrins are iron binding transport proteins who can bind two atoms of ferric iron in association with the bin of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation those of storage and utilization. Serum transferrin may also a further role in stimulating cell proliferation.

-!- FUNCTION: OVOTRANSFERRIN HAS A BACTERIOSTATIC FUNCTION. ITS
                                                                                                        Rawas A., Muirhead H., Williams J.; "Structure of apo duck ovotransferrin: the
                                                                                                                                                                                                                                    Eukaryota; Metazoa;
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Neognathae; Anseriformes; Anatidae; Anas.
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58.3%;
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CARBONATE 2 (VIA AMIDE NITROGEN).
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R PDB; 1AOV; 16-JUN-97.

R PDB; 1DOT; 08-MAR-96.

R PDB; 1GVG; 03-MAY-02.

R PDB; 1GVG; 03-MAY-02.

R PDB; 1GVG; 03-MAY-02.

R PDB; 1OVB; 31-JAN-94.

R InterPro; IPR001156; Transferrin.

R InterPro; IPR001156; Transferrin.

R PRINTS; PR00422; TRANSFERRIN.

R PRINTS; PR00422; TRANSFERRIN.

R SMART; SM00094; TR FER; 2.

R PROSITE; PS00205; TRANSFERRIN.

R PROSITE; PS00206; TRANSFERRIN.

R PROSITE; PS00207; TRANSFERRIN.

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3D-structure.
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SUBCELLULAR LOCATION: Secreted.
SUBCAIN: Composed of two homologous domains.
SIMILARITY: Belongs to the transferrin family.
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        Mismatches
             Score 41; DB 1; Length 686; Pred. No. 8.5;
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RESULT 12
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P03066; Q47411;

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MEDLINE=81074309; PubMed=7003300;
Messen J., Ryder T., Inokuchi H., Ohtsubo H., Ohtsubo E.;
Rosen J., Ryder T., Inokuchi H., Ohtsubo H., Ohtsubo E.;
"Genes and sites involved in replication and incompatibility of "
"Genes and sites involved in replication and incompatibility of R100 plasmid derivative based on nucleotide sequence analysis.";
Rol. Gen. Genet. 179:527-537(1980).
                                                                                                                                                                                                                                                                                                                                                                                                     PLASMID=IncPII NR1;

MEDLINE=85160860; PubMed=2580099;

Womble D.D., Sampathkumar P., Easton A.M., Luckov

"Transcription of the replication control region

R-plasmid NR1 in vitro and in vivo.";

J. Mol. Biol. 181:395-410(1985).
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MEDLINE-81173118; PubMed-6163994;
Rosen J., Ryder T., Ohtsubo H., Ohtsubo
"Role of RNA transcripts in replication
number control in antibiotic resistance
Nature 290:794-797(1981).
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                                                                                                                                                               PLASMID=IncFII R100;
MEDLINE=86319522; PubMed=3019092;
Ohtsubo H., Ryder T.B., Maeda Y., Armstrong K.,
"DNA replication of the resistance plasmid R100
Adv. Biophys. 21:115-133(1986).
-!- FUNCTION: This protein is essential for plasming the control functions."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PLASMID=InCFII NR1;
MEDILINE=89011975; PubMed=3050127;
Mong X., Womble D.D., Rownd R.H.;
"In-vivo studies on the cis-acting replication initiator protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PLASMID=IncfII R1;
MEDLINE=88289416; PubMed=3041379;
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      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
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EMBL; J01770; -; NOT ANNOTATED CDS.
EMBL; X12587; CAA31100.1; -.
EMBL; X12776; CAA31163.1; -.
EMBL; X02302; CAA26168.1; -.
EMBL; X02302; CAA26169.1; ALT_INIT.
EMBL; X02302; CAA26067.1; -.
EMBL; X03302; CAA26067.1; -.
EMBL; A03602; TDECRP.
PIR; A03602; TDECRP.
PIR; 164780; 164780.
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Q9UUE2; Q094
16-OCT-2001
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Wood V., Gwilliam
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Eukaryota; Fungi; Ascomycota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CSX2 OR SPBC17G9.08C.
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Pred. No.
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Schizosaccharomycetes;
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(See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
8.4;
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                                                                                                                                                  Benito J.,
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RESULT 14
YH92
ID YH92
ID YH92
AC Q9YBO
DT 30-MA
APELII
CO Archi
OC TAkala
RA Hoso
RA Hoso
RA Yama
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Best Local S
Matches
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30-MAY-2000
30-MAY-2000
16-OCT-2001
                                                                    MEDLINE=99310339; PubMed=10382966;
Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin. no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., Kc Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamaya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
ZN_FING
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; P850115; ARFGAP; 1.
PROSITE; P850103; PH_DOMAIN; 1.
GTPasse activation; Zinc-finger.
DOMAIN 510 614 PH
DOMAIN 670 791 AR:
DOMAIN 670 791 AR:
DOMAIN 686 710 C4
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        crenarchaeon, Aeropyrum pernix Kl.";
DNA Res. 6:83-101(1999).
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Hirata A., Yanagida M.;
Submitted (FEB-1996) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART; SM00105; ArfGap; 1.
SMART; SM00233; PH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GeneDB Spombe; SPBC17G9.08c; -.
InterPro; IPR002110; ANK.
InterPro; IPR001164; hRIP_like.
InterPro; IPR001849; PH.
Pfam: PR0/410.
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SEQUENCE OF 158-345 FROM
                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                         Desulfurococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                          Aeropyrum pernix.
Archaea; Crenarchaeota; Thermoprotei; Desulfurococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hypothetical
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Pfam; PF00169; PH; 1.
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-!- SIMILARITY: Contains 1 Arf-GAP domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              tities requires a license agreement (S send an email to license@isb-sib.ch).
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870
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(Rel. 39, Last sequence update)
(Rel. 40, Last annotation update)
. protein APE1792.
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  the UPF0097 family
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Pred. No. 38;
1; Mismatches
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C4-TYPE.
NGGSPIYLC -> VVQFVLNMQ (II
, 4B3ED6F6162E80C6 CRC64;
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38;
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                                                                                                                                                                                                                                          Haikawa Y.,
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RESULT 15
TRFE_HORSE
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Best Local S
Matches
                                                                                                                                                                                                      -!- SUBUNIT: Monomer.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Expressed by the liver and
-!- DOMAIN: Composed of two homologous domains.
-!- SIMILARITY: Belongs to the transferrin family.
                                                                                                                                                                                                                                                                                                               Submitted (MAR-1995) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: Transferrins are iron binding transport proteins can bind two atoms of ferric iron in association with the b of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degrada those of storage and utilization. Serum transferrin may als
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TRFE_HORSE STANDARD; PRT; 706 AA. P27425; 01-AUG-1992 (Rel. 23, Created) 01-AUG-1992 (Rel. 23, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) Serotransferrin precursor (Transferrin) (Side
EMBL; M69020; AAA30958.1; -. EMBL; U21127; AAA63684.1; -. PIR; S33761; S33761.
                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
NCBI_TaxID=9796;
                                                                   entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                              McDowell
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Pfam; Pf20834; 2.5_ligase; 2.

Hypothetical protein; Complete proteome.

SEQUENCE 176 AA; 19666 MW; C8BD5FC92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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Dowell K.J., Adams M.H., Baker C.B.;
                                                                                                                                                                                                                                                                                 a further role in stimulating cell proliferation. {\tt SUBUNIT:\ Monomer.}
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ince of horse transferrin.";
/s. Acta 1173:230-232(1993).
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InterPro; IPR001156; Transferrin; 2.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
Transport; Iron transport; Glycoprotein; Metal-binding; Repeat;
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Maximum DB
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seq length: 2000000000
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170.244 Million cell updates/sec
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2: sp_bacteria:*
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O8iu92 homo sapien
O8iu92 homo sapien
O8wmn8 sus scrofa
O7ys20 sus scrofa
O95m57 bos taurus
O8mii0 bos taurus
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RESULT 1 Q8TCD2 ID Q8TC

OSTCD2 PRELIMINARY; PRT; 711 AA.

OSTCD2:
01-JUN-2002 (TrEMBLrel. 21, Created)
01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)

update)

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

Homo sapiens (Human) Lactotransferrin

TISSUE=Prostate; NCBI_TaxID=9606;

EQUENCE FROM N.A.

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005147 rhodococcus	Q9aag8 caulobacter		9ffv5 arabidop	9cb30 mycobacte	0 triticum a	w	Q9ddc6 melanogramm	065341 saccharum r	12 sacc	zea	7 2	caulobacte	ďΩ	sa	Q82qe1 streptomyce	neis	nomo sar	bordete	bordete	borde	μ.	н	Q88ra2 pseudomonas	Q8kzr5 pseudomonas	Q82hu3 streptomyce	Q7xd70 oryza sativ	Q8w5j0 oryza sativ	Q9xfk8 zea mays (m

ALIGNMENTS

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RA Strausberg R.;

Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.

CC (I-FUCTION: TRANSPERRIUS ARE IRON BINDING TRANSPORT PROTEINS WHICH CC (CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING CC (I-SIMILARITY: BELONGS TO THE TRANSFERRIN FAMILY.

CC (I-SIMILARITY: BELONGS TO THE TRANSFERRIN FAMILY.

CC (EMBL; BC022347; AAH22347.1; -.

DR (GO; GO:0005576; C:extracellular; IEA.

GO; GO:0008199; F:ferric iron binding; IEA.

DR (GO; GO:000819; F:ferric iron binding; IEA.

GO; GO:000819; F:ferric iron binding; IEA.

DR (GO; GO:000810; F:transport; IEA.

DR (GO; GO:000826; F:Iron ion transport; IEA.

DR (GO; GO:000810; F:TRANSFERRIN.

DR (FAMILY: SMO0094; TR FER; 2.

DR (FROSITE; PS00205; TRANSFERRIN_1; 2.

DR (FROSITE; PS00205; TRANSFERRIN_3; 2.

DR (FROSITE; PS00207; TR
Query Match
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100.0%;
Score 70;
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DB 4; Length 711; 0.00081;
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I domain of human lactoferrin.";

R EMBL; AV137470; AAN11304-1; -.

R GO; GO:0005575; C:extracellular; IEA.

R GO; GO:0006879; F:ferric iron binding; IEA.

R GO; GO:0006879; P:ixron ion homeostasis; IEA.

R GO; GO:0006879; P:ixron ion transport; IEA.

R GO; GO:0006826; P:ixron ion transport; IEA.

R GO; GO:0006826; P:ixron ion transport; IEA.

R FinterPro; IPR001156; Transferrin.

R Ffam; PR00405; transferrin; 2.

R Ffam; PR00405; transferrin; 2.

R FRANTS; PR00422; TRANSFERRIN 2.

R PROSITE; PS00206; TRANSFERRIN 1; 2.

R PROSITE; PS00206; TRANSFERRIN 3; 2.

R PROSITE; PS00206; TRANSFERRIN 3; 2.

R PROSITE; PS00207; TRANSFERRIN 3; 2.

R PROSITE; PS00207; TRANSFERRIN 3; 2.
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Q8IU92;
Q1-MAR-2003 (TrEMBLrel. 23,
Q1-MAR-2003 (TrEMBLrel. 23,
Q1-OCT-2003 (TrEMBLrel. 25,
TISSUE=Seminal vesicle;
Baskar Singh S., Sarava
Singh T.P.;
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Mammalia; Eutheria;
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01-OCT-2003
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Mammalia; Eutheria;
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                                                                                                        SEQUENCE FROM N.A.
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                                                                                                                                                                                                          Analysis
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Shi Y.-Q., Zhang Y., Zheng Y.-M.;
"Homo sapiens Lactotransferrin Ge
                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
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"Characterization of an amino acid
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                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ARRARVVWCAVGE 372
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ARRARVVWCAVGE 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARRARVVWCAVGE 372
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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                                  Saravanan
                                                                                                                                                                                                                                                                                                                                                                                                                                  Chordata;
Primates;
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(Lactoferrin).
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Last annotation updat
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 70; DB 4;
Pred. No. 0.00081;
; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Craniata; V
Catarrhini;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                  Vertebrata; Euteleostomi; i; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vertebrata; Euteleostomi; i; Hominidae; Homo.
                                                                                                                                                                                                                               Cloning
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                                         Srinivasan
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SECOND PROPERTY OF SECOND PROPER
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Best Local S
Matches 13
Query Match
Best Local S
Matches 10
                                                                                                                                                                                        EMBL; LT7887; AAL40161.1; ...

GO; GO:0005576; C:extracellular; IEA.

GO; GO:0008199; F:ferric iron binding; IEA.

GO; GO:0006879; P:Iron ion homeostasis; IEA.

GO; GO:0006879; P:Iron ion transport; IEA.

GO; GO:0006810; P:transport; IEA.

GO; GO:0006810; P:transferrin.

Pfam; PF00405; transferrin; 2.

PRINTS; PR00422; TRANSFERRIN.

SMART; SM00094; TR FER; 2.

PROSITE; PS00205; TRANSFERRIN.

ROSITE; PS00206; TRANSFERRIN.
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01-MAR-2002
01-OCT-2003
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SEQUENCE
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Submitted (DEC-2002) to the EMBL/GenBank/D
EMBL; AY178998; AAN399981;
EMBL; AY178998; AAN75578.2;
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0005879; F:ferric in binding; IEA
GO; GO:0006879; P:iron ion transport; IEA.
GO; GO:0006826; P:iron ion transport; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

TISSUE=Mammary gland;

Wang S.-R., Lin T.-Y., Weng C.-N.;

Wang S.-R., Lin T.-Y., Weng C.-N.;

Wang S.-R., Lin T.-Y., Weng C.-N.;

"Isolation and expression of porcine milk lactoferrin.";

Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.

-!- FUNCTION: TRANSPERRIN ARE IRON BINDING TRANSPORT PROTEINS 1

CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BIOF AN ANION, USUALLY BICARBONATE (BY SIMILARITY).

-!- SIMILARITY: BELONGS TO THE TRANSFERRIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8WMN8;
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1;
PROSITE; PS00206; TRANSFERRIN_2;
PROSITE; PS00207; TRANSFERRIN_3;
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                                                                                                                                                                      Glycoprotein;
NON_TER
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lactoferrin
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                                                                                                                                      SEQUENCE
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                               Similarity
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78382
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Cetartiodactyla; Suina;
                               82.9%;
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   Score 58; DB 6;
Pred. No. 0.097;
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
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Pred. No. 0.0
0; Mismatches
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547BFC42C9267E67
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                                                                                                                                      64EE769F7503CC32 CRC64;
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; IEA
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ina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0.00081
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                                                                                                                                                                                                      Transport
       0
                                                               Length 704;
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Sus.
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EMBL; AY036583; AAK66816.1; -.
EMBL; AY036581; AAK66816.1; JOINED.
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0008199; P:iron ion homeostasis; IEA.
GO; GO:0006879; P:iron ion transport; IEA.
GO; GO:0006879; P:iron ion transport; IEA.
InterPro; IER001156; Transferrin.
Pfam; PF00405; transferrin; 2.
FRINTS; PR00422; TRANSFERRIN.
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   ARRARVVWCAVG
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112 AA;
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83.3%;
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Pred. No. 0.08
0; Mismatches
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0.089;
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      the RIKEN Genome Exploration Research Group Phase I & II Team; "Analysis of the mouse transcriptome based on functional annot 60,770 full-length cDNAs;"; Nature 420:563-573(2002).
                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRALNE-C57BL/6J; TISSUE=Bone;
MEDLLINE-22354683; PubMed=12466851;
The FANTOM Consortium,
                                                               EMBL;
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[1]
   L; AK036491; BAC29450.1; -.; MGI:96837; Ltf.
GO:0005576; C:extracellular;
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Eukaryota; Metazoa; Mammalia; Eutheria;

Chordata; Rodentia;

Craniata; Vertebrata; I Sciurognathi; Muridae;

Euteleostomi;
; Murinae; Mus

Mus

IEA.

annotation

of f

Mus musculus (Mouse)

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TISSUE=Mammary gland;
Pecorini C., Fogher C., Baldi A.;
Pecorini C., Fogher C., Baldi A.;
"The nucleotide sequence of porcine lactoferrin cDNA.";
Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases
EMBL; AY306198; AAP70487.1; -.
SEQUENCE 704 AA; 77522 MW; AAC8E1767E56BF6A CRC64;
                                     SEQUENCE OF 1-40 FROM N.A.
Li G., Zhang Y., Li N.;
"Analysis of the 5'-region of the bovine lactoferrin gene using
                                                                                                                         Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
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EMBL, X17066; CAA34912.1; -
GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; IEA.
GO; GO:0006879; P:iron ion hemeostasis; IEA.
GO; GO:0006876; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
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SMART; SM00094; TR PER; 1.
PROSITE; PS000205; TRANSFERRIN 2; 1.
PROSITE; PS00206; TRANSFERRIN 2; 1.
PROSITE; PS00207; TRANSFERRIN 3; 1.
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SEQUENCE 355 AA; 38861 MW; 92CI
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Q8CBA0;
01-MAR-2003 (TrEMBLrel. 2
01-MAR-2003 (TrEMBLrel. 2
01-CCT-2003 (TrEMBLrel. 2
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Lactoferrin

Mammalia; Eutheria; Ce Bovidae; Bovinae; Bos. NCBI_TaxID=9913;

Eukaryota; Metazoa; Chordata;

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ARRARVVWCAVG 12

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82.9%;

Score 58; Pred. No.

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355 ARQAKVVWCAVG 366

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Sus scrofa (Pig).
Eukaryota; Metazoa; (Mammalia; Eutheria; (NCBI_TaxID=9823;

Chordata; Craniata; Vert Cetartiodactyla; Suina;

Vertebrata; ina; Suidae;

SEQUENCE FROM N.A.

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Q9N906

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Q9N9Q6;
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                                                             01-UIN-2003 (TYEMBLTE1. 24, Created)
01-UIN-2003 (TYEMBLTE1. 24, Last sequen
01-OCT-2003 (TYEMBLTE1. 25, Last annota
Succinyl-diaminopimelate desuccinylase.
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EMBL; AL365154; CAB96741.1; -.
GO; GO:0005759; C:mitochondrial matrix; IEA.
Interpro; IPR003428; MAM33.
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PRINTS; PRO0422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 1.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
DAPE OR PP1525.
Pseudomonas putida (strain KT2440)
Bacteria; Proteobacteria; Gammapro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=98146435; PubMed=9477341; Ivens A.C., Lewis S.M., Bagherzad Smith D.F.;
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Barrell B.G.;
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NCBI_TaxID=5664;
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615 AA; 6
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    Gammaproteobacteria;
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Q886Q4;
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TIGR; PSP701523; -.
GO; GO:0008237; F:metallopeptidase activity; IEA.
GO; GO:0006508; P:proteolysis and peptidolysis; IEA.
InterPro; IPR002933; Peptidase_M20.
Pfam; PF01546; Peptidase_M20; 1.
                                                                                                                                                                                                                                                                                                                                                                 Buell R., Joardar V., Khouri H., Fedorova N., Tran B., Russell D. Berry K., Utterback T., Van Aken S., Feldblyum T., Gwinn M., Dodson R., DeBoy R., Durkin A., Kolonay J., Madupu R., Daugherty Brinkac L., Beanan M., Haft D., Selengut J., Nelson W., Davidsen White O., Fraser C., Collmer A.; "Complete sequence of Pseudomonas syringae."; Submitted (MAR-2003) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=22423060; PubMed=12534463;
Nelson K.E., Weinel C., Paulsen I.T., Dodson R.J., Hilbert H.,
Martins dos Santos V.A.P., Fouts D.E., Gill S.R., Pop M., Holmes
Brinkac L., Beanan M., DeBoy R.T., Daugherty S., Kolonay J.,
Madupu R., Nelson W., White O., Peterson J., Khouri H., Hance I.
Chris Lee P., Holtzapple B., Scanlan D., Tran K., Moazzez A.,
Utterback T., Rizzo M., Lee K., Kosack D., Moestl D., Wedler H.,
Lauber J., Stjepandic D., Hohelsel J., Strater M., Heim S.,
Kiewitz C., Eisen J., Timmis K.N., Duesterhoeft A., Tuemmler B.,
Fraser C.N.;
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                                                                                                                                                                       Complete protecme.
SEQUENCE 383 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Complete genome sequence and comparative a metabolically versatile Pseudomonas putida Environ. Microbiol. 4:799-808(2002).
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NCBI_TaxID=160488;
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(TrambLrel. 25, Last annotation update)
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SEQUENCE FROM N.A.

SITAIN=AUTCC 15692 / PAO1;

MEDLINE=20437337; bubMed=10984043;

MEDLINE=20437337; bubMed=10984043;

Stover C.K., Pham X.-Q.T., Erwin A.L., Mizoguchi S.D., Warrener P.,

Hickey M.J., Brinkman F.S.L., Hifnagle W.O., Kowalik D.J., Lagrou M.,

Gazber R.L., Goltry L., Tolentino E., Westbrock-Wadman S., Yuan Y.,

Brody L.L., Coulter S.N., Folger K.R., Kas A., Larbig K., Lim R.M.,

Bridy L.L., Coulter S.N., Folger K.R., Kas A., Larbig K., Lim R.M.,

Smith K.A., Spencer D.H., Wong G.K.-S., Wu Z., Paulsen I.T.,

Reizer J., Saier M.H., Hancock R.E.W., Lory S., Olson M.V.;

"Complete genome sequence of Pseudomonas aeruginosa PAO1, an

Opportunistic pathogen.";
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Q9I4H5;
SEQUENCE FROM N.A.

XU C.S., Li W.Q., Li Y.C., Han H.P., Wang G.P., Chai L.C.

XU C.S., Li W.Q., Li Y.C., Zhao L.F., Ma H., Wang Yang K.J., Yan H.M., Chang C.F., Zhao L.F., Ma H., Wang Yang K.J., Yan H.M., Chang Q.N., Zhang J.B.;

Shi J.B., Rahman S., Wang Q.N., Zhang J.B.;

"Liver regeneration after PH";

"Liver regeneration after PH";

Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.

EMBL; AV325160; AAP92561.1; -

EMBL; AV325160; AAP92561.1; -
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InterPro; IPR005941; Pept_M20A_mph.
Pfam; PF01546; Peptidase M20; I.
TIGRPAMS; TIGR01246; dapE_proteo; 1.
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EMBL; AE004546; AAG04551.1; -.
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Mammalia; Eutheria;
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GO:0009014; F:succinyl-diaminopimelate desuccinylase acti.
GO:0009089; F:lysine biosynthesis via diaminopimelate; IEA.
GO:0006508; P:proteolysis and peptidolysis; IEA.
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A Arakawa T., Hara A., Fukunishi Y., Konno H., Adachi J., Fukuda S.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Aizawa K., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
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A Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,
A Kadota K., Matsuda H.A., Nikaido I., Pesole G., Quackenbush J.,
A Kadota K., Matsuda H.A., Ashburner M., Wagner L., Washio T.,
A Schriml L., M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T.,
A Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F.,
A Blake J., Bath C., Fletcher C., Fujita M., Gariboldi M.,
A Buromstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M.,
A Buromstein M.J., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H.,
A Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P.,
A Sasaki H., Sato K., Schoenbach C., Sepiger T., Shibata Y., Storch K.-F.,
A Suzuki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.,
Wayshaw-Boris A., Yoshida K., Hasegawa Y., Kawaji H., Kohtsuki S.,
                                                                                                                                   Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                            "Functional annotation of a full-length m Nature 409:685-690 (2001).

EMBL; AK005035; BAB23762.1; -.

HSSP; P19134; 1TFD.

GO; GO:0005576; C:extracellular; IEA.

GO; GO:0006199; F:ferric iron binding; II

GO; GO:0006879; P:iron ion homeostasis; II

GO; GO:0006879; P:iron ion transport; IEA.

InterPro; IPR001156; Transferrin.

Pfam; PF00405; transferrin; 2.
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Q9DBD0;
Q9DBD0;
01-JUN-2001
01-JUN-2001
01-OCT-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                              SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN=C57BL/6J; TISSUE=Liver; MEDLINE=21085660; PubMed=11217851;
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                                                                                                                                                                                                                            SEQUENCE
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354 RVKWCAVGQ 362
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                                                                                                                                                                                                                      ;; PR00422; TRANGEERRIN.

SM00094; TR FER; 5.

E; PS00205; TRANGEERRIN 1; 1.

E; PS00207; TRANGEERRIN 3; 1.

102 700 AA; 76765 MW; 38C991D1021AE548 CRC64;
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Last sequence update)
Last annotation update)
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                                                                                                           Score 43; DB Pred. No. 39; 1; Mismatches
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AC OBVOSS:
DT 01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT 01-CCT-2003 (TrEMBLrel. 25, Last annotation update)
DT 01-CCT-2003 (TrEMBLrel. 25, Last annotation update)
DE RIKEN CDNA 1300017J02 gene.

GR 11300017J02RIK.
OS Mus musculus (Mouse).
CC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
CC Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
CC RISCUB-Liver;
RN 119-CT ROWN N.A.
RC TISSUB-Liver;
RR SEQUENCE FROM N.A.
RC TISSUB-Liver;
RA SIGNIBUSE; S100017J02Rik.
CC CT COUNTY CONTROL TO THE EMBL/GenBank/DDBJ databases.
REMBL; BC021390; AAH21390;1; -.
DR RCH; BC021390; AAH21390;1; -.
DR RCH; GC: GC: 0005576; C: extracellular; IEA.
DR GC: GC: 0005576; C: extracellular; IEA.
DR GC: GC: 0006872; P: iron ion transport; IEA.
DR GC: GC: 0006872; P: iron ion transport; IEA.
DR GC: GC: 0006872; P: iron ion transport; IEA.
DR GC: GC: 0006872; TRANSFERRIN_3; 1.
DR RCH; PROUCH; TRAFER; 2.
DR RRINT; SM00094; TRAFER; 2.
DR RRINT; SM00094; TRAFER; 2.
DR RRINT; PROUCH; PR
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Database
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Maximum Match 100%
Listing first 45 summaries
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Perfect score:
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1: geneseqp1980s:*
2: geneseqp1990s:*
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305
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117.402 Million cell updates/sec
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Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Aaw24800 Spinocere	Abb70046 Drosophil	818	2971 B	Aap83194 Sequence	Add85172 Mussel ad	Abu65174 Human NOV	6694	Novel	Novel	Human	Aam05737 Peptide #	Aam57857 Human bra)275	50 Protein	1899 Peptide	Peptide	137 Peptide	Aam18102 Peptide #	10 Human mo	6 Human MO	50 Human mi	6 Human	Aar39351 Recombina	93881 Bifidob	iption

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w	ABG25235	AAR80839	ABB68526	AAP82973	AAP83196	ABM57762	AAU61243	ADE08749	AAY84457	AAB60493	ABG05032	AAY50557	ABB69998	ABR43313	AAW60213	ADD18752	ABB82698	AAY33495	AAW33807
Abb62538	Abg25235	Aar80839	Abb68526	Aap82973	Aap83196	Abm57762	Aau61243	Ade08749	Aay84457	Aab60493	Abg05032	Aay50557	Abb69998	Abr43313	Aaw60213	Add18752	Abb82698	Aay33495	Aaw33807
Drosophil	Novel hum	Japanese	Drosophil	Bioadhesi	Sequence	Propionib	Propionib	Novel pro	Amino aci	Human cel	Novel hum	HSV1 LAT	Drosophil	Canis fam	Spinocere	Human dis	Human SCA	Human SCA	Human ata

ALIGNMENTS

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This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bovine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt concent below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing Bifidobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-B0)-(Ew-E0) is at least 0.15 are	e 3; 25pp; German.	WPI; 1999-244022/20. Milk-derived peptides that stimulate Bifidobacterium bifidus.	Forssmann W, Zucht H, Liepke C;	(FORS/) FORSSMANN W.	16-SEP-1997; 97DE-01040604. 11-FEB-1998; 98DE-01005385.	16-SEP-1998; 98WO-EP005899.	25-MAR-1999.	WO9914231-A2.	Bifidobacterium bifidum.	vaginal microflora.	diarrhoea; colic; oral microflora; intestinal microflora; caries;	bacteria; rungi; yeast; protozoa; virus; mycopiasma; riiaria; piasmouia; infection: inflammation: microbial induced tumour; degenerative disorder;	Bifidogenic peptide; protease; treatment; microbe-related disease;	Bifidobacterium bifidus stimulating peptide 17.	25-JUN-1999 (first entry)			LT 1 3881 AAW93881 standard; peptide; 55 AA.

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RESULT 2
AAR39351
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Best Local S
Matches 55
                          Query Match
Best Local :
      Matches
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                                                                                                            either a eukaryotic or prokaryotic expression system. It is used as a nutrient supplement in milk based products to provide a substantial improvement of the nutritional and biological value of the formulae, making it closer in similarity to human milk. It can also be used as a pharmaceutical. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                             Claim 44; Page 88-89; 110pp; English
                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                             WPI;
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26-JAN-1994
                                                                                      Sequence 182 AA;
                                                                                                                                                                                                                                                                                                                                       DNA encoding human kappa-casein - used for obtaining recombinant polypeptide(s) for use as nutrient supplements, partic. in infan
                                                                                                                                                                                                                                                                                                                                                          DNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-JAN-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-JAN-1993;
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DB; AAQ46850.
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      Conservative
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(first en
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                          100.0%;
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                          Score
Pred.
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Pred. No. 7.9e-30;
      Mismatches
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e 305; Ub .,
1. No. 3.1e-29;
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63
YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
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A commercial cDNA library prepd. in lambda gt11 from mRNA obtd. from human breast tissue removed during the third trimester of pregnancy screened with rabbit anti-bovine kappa-casein cDNA. The cDNA insert recombinant phage was amplified by PCR to obtain a full-length clone (AAQ89598) encoding human kappa-casein (AAR72696)
                                                                  Sequence 182 AA;
                                                                                                                                                                                                                                                                                                                                                                                                            13-OCT-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                            13-OCT-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kappa-casein; milk protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human kappa-casein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   06-NOV-1995
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                                                                                                                                                                                                                                     highly
                                                                                                                                                                                                                                                                                                                                          Ham RG,
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                                                                                                                                                                                                                                                                                                                                                                           (COLS )
                                                                                                                                                                                                                                  encoding human kappa-casein - used for the prodn. of
hly purified kappa-casein milk protein for infant use
55;
                                                                                                                                                                                                                                                                                                                                                                           UNIV COLORADO FOUND INC
                Similarity
                                                                                                                                                                                                                                                                                                                                         Jeffers KF,
                                                                                                                                                                                                      Col
Conservative
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              100.0%;
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Pred.
 Mismatches
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                305; DB 2;
No. 3.1e-29;
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                              Length 182;
                                                                                                                                                                                                                                                       of large amts.
                                                                                                                     clone
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뮹. Š Query Match Best Local Matches 63 μ YORRPAIAINNPYVPRTYYANPAVVRPHAQIPORQYLPNSHPPTVVRRPNLHPSF YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF Gaps 55

0

RASSULT 4 AAR92150 ID AAR8 AC AAR9 AC AAR9 AC AAR9 XX AAR9 XX AAR9 XX WAINE XX WAINE XX WINE XX WINE XX WOSE PN WOSE XX WOSE

AAR92150 standard; protein; 182 A

AAR92150;

24-OCT-1996 (first entry]

Human milk kappa-casein, inhibits rotaviral infection

Milk protein; rotein; kappa-casein;
formulation; immunode immunodeficiency; rotavirus inhibition; gastroenteritis; eficiency; diarrhoea.

WO9608269-A1

21-MAR-1996

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1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF

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ID AAB18216
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                secreted molecule; MOL6 protein; MOLX; cardiomyopathy; atherosclerosis; diabetes; chromoscomal disorder; albinism; anaemia; psoriasis; scarring; liver cirrhosis; neurodegeneration; osteoarthritis; organ rejection; cerebral thrombosis; hypertension; systemic lupus erythematosus; asthma; immune disease; ischaemia; immunodefictency; rheumatoid arthritis; ulcer; HIV; human immuno deficiency virus; hepatitis; haemostatic disease; pain; haematopoietic; thrombolytic; thrombocytopaenia; Alzheimer's disease; pain; haematopoietic; growth disorder; depression; epilepsy; contraceptive; vulnerary; osteopathic; haemostatic; tranquiliser; antidepressant; vulnerary; osteopathic; haemostatic; tranquiliser; antidepressant;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 182 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-MAY-1995;
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16-SEP-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fig 9; 42pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                          vasotropic; hypotensive;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
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94US-00308883
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                                                                                                                                                                           /label= Signal_peptide
25. .181
/label= Mature_MOL6_protein
                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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Pred. No. 3.1e-29;
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03-JUL-2001; 2001WO-US021249

Human molecule (MOL) protein MOL6

15-JAN-2004

(first entry)

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RESULT 6
ADD18210
ID ADD1
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AC ADD1
XX
DT 15-J
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                                                                                                                                                                                                                                                                                                                                                                                                                                                The patent discloses nucleic acid sequences encoding novel secreted CC molecule (MOL) polypeptides, designated MOLX polypeptides (i.e. a MOL protein where X is an integer from 1 to 8). Sequences of the invention CC protein where X is an integer from 1 to 8). Sequences of the invention CC are useful for treating or preventing a MOLX-associated disorder in CC humans. They are useful for treating or preventing cardiomyopathy, CC atheroscis and disorders related to cell signal processing and CC metabolic pathway modulation. The MOLX annibodies are useful for treating CC or preventing diabetes and disorders related to cell signal processing CC and metabolic pathway modulation. MOLX sequences are useful for the CC treatment or diagnosis of other MOLX-associated disorders, e.g. cromosomal disorders, albinism, anaemia, liver cirrhosis, psoriasis, CC scarring, neurodegeneration, osteoarthritis, organ rejection, cerebral CC disease, immunodeficiency, HIV (human immuno deficiency virus), viral, CC disease, immunodeficiency, Howan immuno deficiency virus), viral, CC disease, immunodeficiency, heemostatic diseases, thrombocytopaenia, CC ulcers, Alzheimer's disease, Parkinson's disease, Huntington's disease, CC cular disease, muscular disease, prowth disorders, loss of libido, CC cular disease, muscular disease, prowth disorders, loss of libido, CC cular disease, pain and epilepsy. They are useful for preventing CC invention are also useful for green therapy. The present sequence is human companies of the mother of the contrace provents of the contrace provents of the sequence of the contrace provents of the sequence of the contrace provents of the sequence of the contrace provents of the contrace provents
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Matches 45
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03-JUL-2000;
03-JUL-2000;
07-JUL-2000;
07-JUL-2000;
07-JUL-2000;
17-JUL-2000;
17-JUL-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nucleic acids encoding secreted polypeptides, designated MOLX polypeptides, useful for treating a MOLX-associated disorder, e.g. cardiomyopathy, atherosclerosis, diabetes and metabolic disorders.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-155038/20.
N-PSDB; AAD28950.
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Patturajan M,
                                                                                                                                                                                                                                                                                                                                                                                              Sequence 181
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                                                                                                  ADD18210;
                                                                                                                                        ADD18210 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                   kappa caesin precursor-like protein, MOL6
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2000US-0216586P
2000US-0216722P
2000US-0218622P
2000US-0218622P
2000US-021285P
2000US-0268734P
                                                                                                                                                                                                                                                                                                                  73.9%; ilarity 81.8%; Conservative
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, Taupier RJ,
Lepley DM, S
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2000US-0215856P.
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                                                                                                                                      protein; 181
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Liu X, Shenoy S, Rastelli L, Gross
Rastelli L, Gross
Shen L, Burgess CE,
                                                                                                                                                                                                                                                                                                                    2;
                                                                                                                                                                                                                                                                                                                    Score 225.5;
Pred. No. 1.6e
2; Mismatches
                                                                                                                                                                                                                                                                                                                    No. 1.6e-19;
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                                                                                                                                                                                                                                                                                                                                                            DB 5;
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sse WM, Szek
E, Shimkets
                                                                                                                                                                                                                                                                                                                                                          Length
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                                                                                                                                                                                                                                                                                                                                                              181;
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RESULT 7
AAM18102
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AC AAM1
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AC AAM1
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05-JUL-2001; 2001US-0303241P.
26-SEP-2001; 2001US-00965212.
26-SEP-2001; 2001US-0096545.
26-SEP-2001; 2001US-0096546.
01-APR-2002; 2002US-0368996P.
01-APR-2002; 2002US-036996P.
01-APR-2002; 2002US-0379730P.
30-MAY-2002; 2002US-0386316P.
07-JUN-2002; 2002US-0386816P.
17-JUN-2002; 2002US-03174372.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferna...
Boldog FL, Lr.
Burgess CE, Gr.
Patturajan M,
Thinler RJ, T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fernandes ER, 1
                                                                                                                                                                                                                                                                                                                  This invention relates to novel human nucleic acid sequences which encode novel molecule (MOL) proteins numbered MOLI-23, referred to generally in the specification as MOLX. Compounds which modulate the function of the MOLX proteins of the invention, MOLX agonists or antagonists, may have cardiant, antidiabetic or antiarreriosclerotic activities. In addition, the DNA and protein sequences disclosed may prove useful for gene therapy. The protein, nucleic acid or antibody is useful for preparing a composition for treating or preventing a MOLY-associated disorder, for example cardiomypathy, diabetes or atherosclerosis. The present sequence is the amino acid sequence of a MOL protein of the invention.
Peptide #4536
                                                             AAM18102;
                                                                                                                                                                                                                                                                                        Sequence 181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New MOLX polypeptide, nucleic acid or MOLX-specific antibody, useful preparing a composition for treating or preventing a MOLX-associated disorder, e.g., cardiomyopathy, diabetes or atherosclerosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        molecule protein; MOL p cardiant; antidiabetic; MOLX-associated disorde
                                12-OCT-2001
                                                                                          AAM18102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 1; SEQ ID NO 20; 371pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (CURA-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2003-210304/20.
)B; ADD18209.
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                                                                                                                                                                                                                                45;
                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURAGEN
                                                                                          standard;
                                                                                                                                                                    YKRRPAIALNNQYGLRTYYATQAVVRAHAQIPQRQYLPNSH-HTVVRRPNLHPSF 116
                                                                                                                                                                                      YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ., Vernet CAM, Shimkets RA, Anderson DW, Padigaru N
Li L, Shenoy SG, Casman SJ, Rastelli L, Alsobrook
Grosse WM, Gusev VY, Ji W, Lepley DM, Liu X, Mez
Shen L, Spaderna SK, Spytek KA, Szekeres ES;
Tchernev VT, Zerhusen BD, Voss EZ;
                                                                                                                                                                                                                                                                                          A
                             (first entry)
 encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       n; MOL protein; MOLX; MOLX agonist; MOLX antagonist;
labetic; antiarteriosclerotic; gene therapy;
disorder; cardiomyopathy; diabetes; atherosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORP.
                                                                                        protein;
                                                                                                                                                                                                                                           73.9%;
by probe
                                                                                          193
                                                                                                                                                                                                                              <u>ب</u>
                                                                                                                                                                                                                             Score 225.5; DB 7;
Pred. No. 1.6e-19;
2; Mismatches 7;
for measuring
cervical
                                                                                                                                                                                                                                                          7;
                                                                                                                                                                                                                                                        Length
gene expression
                                                                                                                                                                                                                                                           181;
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RESULT 8
ABB37137
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-SEP-2000;
27-SEP-2000;
04-OCT-2000;
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
          30-JAN-2001; 2001WO-US000669
                               09-AUG-2001
                                                                                               Human;
                                                                                                                                                                  ABB37137;
                                                                                                                                                                                       ABB37137
                                                                                                                                                                                                                                                                                                                                   Sequence 193 AA;
                                                     WO200157277-A2
                                                                                                                     Peptide #4643 encoded by human foetal liver single exon probe
                                                                                                                                           04-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Penn
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                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expression
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 genome-derived single exon nucleic
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                                                                                               foetal
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                                                                                                                                                                                                                                                                                         18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               human; microarray;
                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULAR DYNAMICS INC.
                                                                                                                                                                                      standard;
                                                                                                                                                                                                                                                                   PAIAINNPYVPRTYYANPAVVRP-HAQIPQRQYLPNSHPPTVVRRPNLHP
                                                                                                                                                                                                                                            PAPAHHHP-----EYQGQPVVSHPHHIMPPQQHYAPPPPPPPPISHPMPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQ ID NO 22928; 487pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hanzel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2000US-0180312P.
2000US-0207456P.
2000US-00608408.
2000US-00632366.
2000US-0234687P.
2000US-0236359P.
2000US-0236359P.
                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                           (first entry)
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                                                                                                                                                                                      peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      human
                                                                                                                                                                                                                                                                                                   23.4%;
                                                                                               gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     cervical epithelial
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                                                                                               expression;
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Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               expression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Rank
                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                English
                                                                                                                                                                                                                                                                                                   71.5;
No. 1
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                                                                                               single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      acid probes useful for analyzing
lial cells.
                                                                                                                                                                                                                                                                                                             DB
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                                                                                               exon nucleic acid
                                                                                                                                                                                                                                                                                        23;
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                                                                                                                                                                                                                                                                                                            Length 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               epithelial cell;
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••
                                                                                               probe
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                                                                                                                                                                                                                                                                                                                                                                                                                                    The SENPs
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\begin{array}{c} \mathsf{T} \mathsf{D} \\ \mathsf{D}
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AAM30614
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 18
                                                                                                                                                                                                                                                                                 04-FEB-2000; 2000US-0180312P.
26-MAY-2000; 2000US-0207456P.
30-JUN-21000; 2000US-0060840B.
03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-0236359P.
04-OCT-2000; 2000GB-00024263.
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21-SEP-2000;
27-SEP-2000;
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26-MAY-2000;
30-JUN-2000;
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WPI; 2001-488897/53
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide #4651 encoded by probe for measuring placental gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17-OCT-2001
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                                                                                                  SG
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2000US-0207456P.
2000US-020608408.
2000US-00632366.
2000US-00632366.
2000US-023468PP.
2000US-0236359P.
2000GB-00024263.
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                                                                                             DK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO 29772; 639pp + Sequence Listing;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        human; placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23.4%;
                                                                                             Chen
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RESULT 10
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Best Local S
Matches 18
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26-MAY-2000;
30-JUN-2000;
03-AUG-2000;
The invention relates to a spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived from human breast and BT 474 cells. The method involves contacting the probes with a collection of detectably labelled nucleic acids derived from mRNA of human breast, and then measuring the label bound to each probe of the microarray. The probes are useful for verifying the expression of regions of genomic DNA predicted to encode proteins. They are useful for gene discovery, and for determining predisposition and/o
                                                                                                                                                New spatially-addressable set of single exon nucleic acid profer measuring gene expression in sample derived from human comprises number of single exon nucleic acid probes.
                                                                                                                            Claim
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                                                                                                                                                                                                                                 Penn SG,
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27-SEP-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; microarray; single exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide #4550 encoded by breast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-FEB-2002
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                                                                                                                                                                                                                                                             (MOLE-)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    genome-derived single exon nucleic expression in human placenta.
                                                                                                                       27; SEQ ID NO 14867; 327pp + Sequence Listing; English.
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                                                                                                                                                                                                                                                            MOLECULAR DYNAMICS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PAPAHHHP-----BYQGQPVVSHPHHIMPPQQHYAPPPPPPPPPBHPMPHP
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2000US-0236359P.
2000GB-00024263.
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2000US-00608408
2000US-00632366
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   probe; gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   expression;
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human breast
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    disease;
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RESULT 11
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AX ABB22
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     measuring human gene expression in a sample derived from human heart (see ABA21535-ABA41305). The present sequence is a protein encoded by one such probe. The proses may be used for predicting, measuring and displaying gene expression in samples derived from the human heart via microarrays. By measuring gene expression, the probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human heart and vascular system e.g. cardiovascular disease, hypertension, cardiac arrhythmias and congenital heart disease.
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30-JUN-2000;
03-AUG-2000;
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                                                                                                                                                                                                                                                                   Claim 15;
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sequence data for this patent did
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2000US-0207456P
2000US-00608408
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Pred. No. 1.1;
4; Mismatches
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ension; cardiac
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                                                                                                                                                                                                                                                                                                                                               human
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RESULT 12
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Best Local S
Matches 18
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       specification, but was obtained in electronic format directly from WIPO at ftp.wipo.int/pub/published_pct_sequences
                                                                                Sequence 193
                                                                                                  samples, which may enable the improved diagraph as lymphoma, leukaemia and myeloma. The protein encoded by one of the probes of the
                                                                                                                                 probes which are derived bone marrow. They can be
                                                                                                                                                                                                gene
                                                                                                                                                                                                                             WPI;
                                                                                                                                                                                                                                                 Penn
                                                                                                                                                                                                                                                                                                                      30-JUN-2000;
03-AUG-2000;
                                                                                                                                                                                                                                                                                                                                          04-FEB-2000;
26-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                               09-AUG-2001.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human; bone microarray;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human bone marrow expressed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 193
                                                                                                                                                       The
                                                                                                                                                                          Example 4; SEQ ID NO 30581; 658pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                          30-JAN-2001; 2001WO-US000668
                                                                                                                                                                                                                                                                                                                                                                                                                   WO200157276-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAM70275 standard;
                                                                                                                                                                                                                                                                                                              21-SEP-2000;
                                                                                                                                                                                                                                                                      (MOLE-)
                                                                                                                                                        present invention
                                                                                                                                                                                                                                                  SG,
                                                                                                                                                                                               genome-derived single exon nucleic expression in human bone marrow.
                                                                                                                                                                                                                            2001-488900/53.
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                                       l Similarity
18; Conserv
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                                                                                                                                                                                                                                                                      MOLECULAR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PAPAHHP----BYQGQPVVSHPHHIMPPQQHYAPPPPPPPPPISHPMPHP
                    PAIAINNPYVPRTYYANPAVVRP-HAQIPQRQYLPNSHPPTVVRRPNLHP
                                                                                                                                                                                                                                                  Hanzel
                                                                                                                                                                                                                                                                                         2000US-00632366.
2000US-0234687P.
2000US-0236359P.
2000GB-00024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          marrow expressed ex
cancer; leukaemia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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A
                                         Conservative
                                                                                 A.
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                                                                                                                                                                                                                                                                                                                                           2000US-0207456P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
                                                                                                                                                                                                                                                 DK,
                                                                                                     derived from genomic sequences expressed in brong can be used to measure gene expression in both y enable the improved diagnosis and treatment leukaemia and myeloma. The present sequence if y one of the probes of the invention
                                                                                                                                                                                                                                                                      DYNAMICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23.4%;
                                                  23.4%;
-EYQGQPVVSHPHHIMPPQQHYAPPPPPPPPPISHPMPHP
                                                                                                                                                        provides a number of single exon
                                                                                                                                                                                                                                                  Chen
                                                                                                                                                                                                                                                  Σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 71.5; D
Pred. No. 1.1;
4; Mismatches
                                         Score 71.5; DE Pred. No. 1.1; 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     exon;
                                                                                                                                                                                                                                                  Rank
                                                                                                                                                                                                                                                                                                                                                                                                                                                           lymphoma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ያ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        encoded protein SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      expression
                                                                                                                                                                                                           acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                           myeloma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     멂
                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    4
                                          23;
                                                                                                                                                                                                           probes useful for analyzing
                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      analysis;
                                                                                                                                                          nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     193;
                       53
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                                          ū
                                                                                                                                       bone marrow
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                                           Gaps
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RESULT

13

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AAM57857
IID AAM6
XX AAM6
XX OS-N
DT OS-N
XX Huma
XX Al2:
XX A
                                                                                                                                                                                                                                                                                                        RESULT 14
AAM05737
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Best Local S
Matches 18
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26-MAY-2000; 2000US-0207456P.
30-JUN-2000; 2000US-00608409.
03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-02345359.
04-OCT-2000; 2000GB-00024263.
                                                              Probe; human; inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The present invention provides a number of single exon nucleic acid probes which are derived from genomic sequences expressed in the human brain. They can be used to measure gene expression in brain cell samples, which may enable the diagnosis and improved treatment of nervous system diseases such as Alzheimer's disease, multiple sclerosis, schizophrenia, epilepsy and cancers. The present sequence is a protein encoded by one of the probes of the invention
                    Homo sapiens
                                                                                                                                                                                     09-OCT-2001
                                                                                                                                                                                                                                       AAM05737
                                                                                                                                                                                                                                                                                  AAM05737 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Penn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2001-483446/52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30-JAN-2001; 2001WO-US000667
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alzheimer's disease; multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human brain expressed single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAM57857;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SG,
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                                                                                                                                       #4419
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4.
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                                                                                                                                                                                                                                                                                                                                                                                                PAPAHHHP----EYOGOPVVSHPHHIMPPQQHYAPPPPPPPPBISHPMPHP
                                                                                                                                                                                                                                                                                                                                                                                                                                           PAIAINNPYVPRTYYANPAVVRP-HAQIPQRQYLPNSHPPTVVRRPNLHP 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hanzel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQ ID NO 29962; 650pp + Sequence Listing; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    nucleic acid probes
                                                            ; breast disease; breast cancer; development disorder; disease; proliferative breast disease; non-carcinoma tumour.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ĀΑ;
                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         expressed exon;
                                                                                                                                       encoded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
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                                                                                                                                                                                                                                                                               protein; 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.4%;
                                                                                                                                     by probe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 71.5; DB
Pred. No. 1.1;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   exon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sclerosis;
                                                                                                                                       for
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                                                                                                                                                                                                                                                                               Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for analyzing gene expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             expression analysis; probe; microarray; erosis; schizophrenia; epilepsy; cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 probe encoded protein SEQ ID
                                                                                                                                  measuring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   뮸
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.
                                                                                                                                  breast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 193;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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RESULT 15
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Matches 18
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26-MAY-2000; 2000US-0207456P.
30-UUN-2000; 2000US-00608408.
03-AUG-2000; 2000US-00632366.
21-SEP-2000; 2000US-0234687P.
27-SEP-2000; 2000US-02345359P.
04-OCT-2000; 2000GB-00024263.
                                                          primary
hyaline
                                                                                                                                 Human; single exon probe; asthma; lung cancer; COPD; ILD; chronic obstructive pulmonary disease; interstitial lung disease; familial idiopathic pulmonary fibrosis; neurofibromatosis; tuberous sclerosis; Gaucher's disease; Niemann-Pick disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present invention relates to novel single exon nucleic acid probes (see AAI00010-AAI10067). The present sequence is a peptide encoded by one such probe. The probes are useful for measuring human gene expression in a human breast sample, where the probe hybridises at high stringency to a nucleic acid expressed in the human breast. The probes are useful for predicting, diagnosing, grading, staging, monitoring and prognosing diseases of the human breast, particularly those diseases with polygenic actiology. The diseases include: breast cancer, disorders of development, inflammatory diseases of the breast of the breast particularly those diseases with polygenic inflammatory diseases of the breast particularly fibrocystic changes, proliferative breast disease and non-carcinoma tumours. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from WIPO at
                                                                                     Hermansky-Pudlak syndrome; sarcoidosis; pulmonary haemosiderosis; pulmonary histiocytosis; lymphangioleiomyomtosis; Karagener syndrome; pulmonary alveolar proteinosis; fibrocystic pulmonary dysplasia;
                                                                                                                                                                                                                Human peptide encoded by genome-derived single exon probe
                                                                                                                                                                                                                                                     19-AUG-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ftp.wipo.int/pub/published_pct_sequences
                                                                                                                                                                                                                                                                                                                  ABG39918
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Novel single exon nucleic a human breast.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Penn
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                                                                                                                            ហ
                                                            ciliary dyskinesis; pulmonary hypertension; membrane disease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULAR DYNAMICS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          193
                                                                                                                                                                                                                                                                                                                  standard;
                                                                                                                                                                                                                                                                                                                                                                                            PAPAHHHP-----EYQGQPVVSHPHHIMPPQQHYAPPPPPPPPPISHPMPHP
                                                                                                                                                                                                                                                                                                                                                                                                                          PAIAINNPYVPRTYYANPAVVRP-HAQIPQRQYLPNSHPPTVVRRPNLHP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                  (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ID NO 14477; 322pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DK,
                                                                                                                                                                                                                                                                                                              peptide; 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chen W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 71.5; D
Pred. No. 1.1;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                          4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            probe used to measuring
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 193;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene expression
                                                                                                                                                                    disease;
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WC200186003-A2 Homo sapiens

30-JAN-2001; 2001WO-US000665

15-NOV-2001

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complements or the 12387 open reading trames derived from the 12514 complements of the 12514 operates. Also included are a microarray comprising the novel set of probes called included are a microarray comprising the novel set of probes called the novel set of the called from human lung comprising (a) contacting the array with a collect acids from the label detectably bound to each probe of the carray; identifying exons in a sukaryotic genome, comprising (a) algorithmically predicting at least one exon from genomic sequences of the entharyote; and (b) detecting specific hybridisation of detectably called in the sukaryotic lung mRNA, to a single exon probe, comprising (a) identifying exons from genomic sequence by the method called in the probe and (b) measuring the expression of each of the exons in several crisques and/or cell types using hybridisation to a single gene of 12011 sequences, mentioned in the tissues and/or cell types indicates that the exons should be assigned to a single gene; a peptide comprising one of 12011 sequences, mentioned in the specification, or encoded by the correspondence, sarcoidosis, pulmonary disease (COPD), interstitial lung cancer; chronic obstructive pulmonary diseases such as asthman lung cancer; chronic obstructive pulmonary disease (COPD), interstitial lung disease (ILD), familial idiopathic pulmonary fibroasis, neurofibromatosis, cut argener syndrome, sarcoidosis, pulmonary haemosiderosis, pulmonary of the substance of the printed specification, but was obtained in electronic format confirmation. Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format the company called the printed specification, but
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                                                                                Matches
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Best Local
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30-JUN-2000;
03-AUG-2000;
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27-SEP-2000; 2000US-0236359P.
04-OCT-2000; 2000GB-00024263.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The invention relates to a spatially-addressable set of single exon nucleic acid probes for measuring gene expression in a sample derived from human lung comprising single exon nucleic acid probes having one 12614 nucleic acid sequences mentioned in the specification, or their complements or the 12387 open reading frames derived from the 12314
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Spatially-addressable set of single exon nucleic acid probes, used measure gene expression in human lung samples.
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                                                                                                                                                               Sequence 193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27; SEQ ID NO 29583; 634pp; English.
                                                                                l Similarity
18; Conserv
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PAPAHHHP----EYQGQPVVSHPHHIMPPQQHYAPPPPPPPPPISHPMPHP 60
                                     PAIAINNPYVPRTYYANPAVVRP-HAQIPQRQYLPNSHPPTVVRRPNLHP 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hanzel DK,
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; 2000US-0207456P.
; 2000US-00608408.
; 2000US-00632366.
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                                                                                                    23.4%;
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                                                                                Score 71.5; DB Pred. No. 1.1; 4; Mismatches
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                                                                                                                            DB 5;
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                                                                                       Gaps
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Search completed: September 1, 2004, 00:09:49
Job time: 137.367 secs

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Minimum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
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| Comb.pep:*
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                                                                  US-09-252-991A-22460
US-09-252-991A-18780
US-09-252-991A-30695
US-09-281-766-19
                                                                                                                                                                                                                                                                       US-09-041-886-19

US-09-648-281-2

US-09-677-919A-19

US-09-083-268-3

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US-09-252-991A-18170

US-09-252-991A-21920
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US-08-308-883-2
US-08-730-163-2
US-08-750-163-2
US-08-256-799-2
US-08-462-437-2
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Sequence 2, Appli
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Sequence 3, Appli
Sequence 18170, A
Sequence 18170, A
Sequence 18223, A
Patent No. 5202236
Sequence 22460, A
Sequence 18780, A
Sequence 30695, A
Sequence 19, Appl
Sequence 21500, A
Sequence 21560, A
Sequence 24902, A
                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 5202236
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Sequence
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Sequence 31,
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US-07-962-569A-8
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Best Local Similarity
                                                                                                                                                                                                                             LENGTH: 1
TYPE: AMI
TOPOLOGY:
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ZIP: 92127
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STATE: CA
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USA
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ALIGNMENTS

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; MOLECULE TYPE: protein US-07-962-569A-8
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APPLICANT: MENON, RAVI S.
APPLICANT: CHANG, YING-FON
APPLICANT: CHANG, YING-FON
APPLICANT: HAM, RICHARD G.
TITLE OF INVENTION: HUMAN K-
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 8, Application Patent No. 5391497
                                                                                                                                                                                                                              TRIEFAX: (619) 451-9628
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTERISTICS:
LENGTH: 182 amino acids
TYPE: AMINO ACID
TODDIOGY. 13027
                                                                                                                                                                                                                                                                                                                                                                                                                         ZIP: 92127
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: FREDERICK W. PEPPER, STREET: 11545 W. BERNARDO COURT,
                  YQRRPATAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 117
                                                      100.0%; Score 305; DB 1; llarity 100.0%; Pred. No. 5.3e-30; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                         Floppy disk
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NS, KATHLEEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HUMAN K-CASEIN
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T, STE. 302
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RESULT 2
US-08-308-883-2
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GENERAL INFORMATTOM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: (614) 624-307
TELEX: NO. 5576300e
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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DESCRIPTION:
HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER: Apple Macintosh
OPERATING SYSTEM: MacIntosh System 7.1
SOFTWARE: Clarisworks 1.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/308,883
FILING DATE: 16-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA: No. 5
TELECOMMUNICATION INFORMATION:
TELEPHONE: (614) 624-3774
TELEPAX: (614) 624-3074
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Lonnie R. Drayer
ADDRESSEE: ROSS Products Division
ADDRESSEE: Abbott Laboratories
STREET: 625 Cleveland Avenue
IDENTIFICATION METHOD:
OTHER INFORMATION:
PUBLICATION INFORMATION:
AUTHORS: L. Hansson et al
AUTHORS: DNA Encoding Kappa-Casein,
                                                                                                                                                                                                                                                                                                                                                                             ANTI-SENSE:
FRAGMENT TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET: Columbus
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CHROMOSOME/SEGMENT:
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CELL TYPE:
CELL LINE:
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                                                                                              NAME/KEY:
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VENTION: Method for Inhibition of Human Rotavirus Infection.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     United States
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Prieto,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein.
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Js, R.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          inch,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1.44 Mb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5576300 applicable
   Process for Obtaining the Protein and
      Use
        Τhe
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RESULT 3
US-08-730-163-2
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Best Local S
Matches 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                         TELEFAX: (614) 624-307
TELEX: No. 5712250e
INFORMATION FOR SEQ_ID_NO:
                                                                                                    FRAGMENT TYPE:
ORIGINAL SOURCE:
ORGANISM:
                                                                                                                                                                                                                                                                                                                                                        CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/308,882
FILING DATE: 16-SEP-1994
TELECOMMUNICATION INFORMATION:
TELEPHONE: (614) 624-3774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: 3.5 inch, 1.44 Mb storage (B) COMPUTER: Apple Macintosh OPERATING SYSTEM: MacIntosh System 7.1(D) SOFTWARE: ClarisWorks 1.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 182 amino acids
TYPE: Amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ZIP: 43215
COMPUTER READABLE FORM:
MEDIUM TYPE: 3.5 inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET: 645
STREET: Columbus
CITY: Colio
CTATE: Ohio
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CORRESPONDENCE ADDRESS:
                                                                                                                                                                      DESCRIPTION: HYPOTHETICAL:
                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                      ANTI-SENSE:
HAPLOTYPE:
TISSUE TYPE:
CELL TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOCUMENT NUMBER: PCT/WO93/1519)
FILING DATE: 25-JAN-1993
PUBLICATION DATE: 05-AUG-1993
RELEVANT RESIDUES IN SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VOLUME:
                                                                                                                                                                                                                                                                                                                           TELEPHONE: (614) 624-3074
                                                                                                                                                                                                                       STRANDEDNESS:
TOPOLOGY: Li
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
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                                                INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE:
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                                                                                      STRAIN:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 Similarity 100 55; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INVENTION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Lonnie R. Drayer
E: ROSS Products Division
E: Abbott Laboratories
625 Cleveland Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prieto, P.A.
Seo, A. E.-Y.
Baxter, J.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cummings, R.D.
VENTION: Product for Inhibition of Human Rotavirus Infection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 United States
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                                                                                                                                                                                                                          Linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/08256799
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT: HANSSO
APPLICANT: STROEM
                                                                                                                                       COMPUTER READABLE Flopy disk
MEDIUM TYPE: Flopy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
CURRENT APPLICATION NUMBER: US08/256,799
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                            CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DK 88/92
PILLING DATE: 23-JAN-1992
ATTORNEY/AGENT INFORMATION:
NUMBE: COCKET TITLE A
                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 26
CORRESPONDENCE ADDRESS:
ADDRESSEE: BROWDY AND NEIMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PUBLICATION INFORMATION:
AUTHORS: L. Hansson
                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: DNA ENCODING KAPPA-CASEIN, PROCESS FOR TITLE OF INVENTION: OBTAINING THE PROTEIN AND USE THEREOF
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IMMEDIATE SOURCE:
LIBRARY:
                                                                                                                                                                                                                                                                                                                      STREET: 419 Sever
CITY: Washington
STATE: D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 25-JAN-1993
PUBLICATION DATE: 05-AUG-1993
RELEVANT RESIDUES IN SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION:
IDENTIFICATION METHOD:
OTHER INFORMATION:
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                   COUNTRY: U
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUTHORS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CHROMOSOME/SEGMENT:
             AME: COOPER, Iver P. EGISTRATION NUMBER: 28,005
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SSUE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 117
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DNA Encoding Kappa-Casein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             HANSON, Lennart
STROEMQVIST, Mats
BERGSTROEM, Sven
HERNELL, Olle
Toernell, Jan
Toernell, Jan
                                                                                                                                                                                                                                                                                                                                                          419 Seventh Street, N.W.,
                                                                                                                                                                                                                                                                                                        USA
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HANSSON=1
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                                                                                                                                                                                                                                                                                                                                                            Suite 300
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                                                                                                                                                                                               #1.30
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Query Match
Best Local Similarity
Matches 55; Conserve
                                                                                                                                                                 ; MOLECULE TYPE: protein US-08-462-437-2
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US-08-462-437-2
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ZIP: 20004
COMPUTER READABLE FORM:
COMPUTER READABLE FORM:
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
COUNTY COUN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/08462437 Patent No. 6232094
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Best Local Similarity 100.0%;
Matches 55; Conservative 0
                                                                                                                                                                                                                                                                                                                                  TELEX: 248633
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                            TYPE: amino acids
TOPOLOGY: line
WOLFOUR TYPE: TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/462,437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: COOPER, Iver P.
REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: HAN
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202.628-5197
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LENGTH: 182 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 05-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: DK 88
FILING DATE: 23-JAN-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: HANSSON, Lennart
APPLICANT: STROEMQVIST, Mats
APPLICANT: BERGSTROEM, Sven
APPLICANT: HERNELL, Olle
APPLICANT: TOERNELL, Jan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 3
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TITLE OF INVENTION: FOR OBTAINING THE PROTEIN AND USE THEREOF
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION:
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TELEFAX: 202-737-3528
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USA
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419 Seventh Street, N.W., Suite 300
                                                                                                                                                                                                                                                                                                                                                                                                                                          202-737-3528
                            100.0%;
llarity 100.0%;
Conservative 0,
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                                Score 305; DB 3;
Pred. No. 5.3e-30;
); Mismatches 0;
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Pred. No. 5.3e-30;
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                                                                                         Length 182;
                                Indels
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YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF

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RESULT 6
US-08-462-437-31
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; MOLECULE TYPE:
US-08-462-437-31
                                                                                                                                                ;Patent No. 5202236
APPLICANT: MAUGH, KATHY J.;ANDERSON, DAVID M.;STRAUSBERG,
;SUSAN L.;MCCANDLISS, RUSS;WEI, TENA;FILPULA, DAVID
; TITLE OF INVENTION: METHOD OF PRODUCING BIOADHESIVE
                                                                                                                                                                                                       5202236-37;Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: 202-737-3528
TELEX: 248633
INFORMATION FOR SEQ ID NO: 3
SEQUENCE CHARACTERISTICS:
LENGTH: 182 amino acids
TYPE: amino acid
                                                                                                                                PROTEIN
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Patent No. 62320
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NUMBER OF SEQUENCES: 39
CURRENT APPLICATION DATA::
APPLICATION UMBER: US/07/528,762
FILING DATE: 25-MAY-1990
APPLICATION NUMBER: 82,456
FILING DATE: 07-AUG-1987
APPLICATION NUMBER: 933,945
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT AFFILION NUMBER: US/US/402
FILING DATE: 05-UU-1995
PRIOR APPLICATION DATA:
PRIOR APPLICATION UMBER: DX 88/92
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MEDIUM TYPE: Floppy disk
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ADDRESSEE: BROWDY AND NEIMARK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: DNA ENCODING KAPPA-CASEIN, PROCESS
TITLE OF INVENTION: FOR OBTAINING THE PROTEIN AND USE THEREOF
NUMBER OF SEQUENCES: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 202-628-5197
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REGISTRATION NUMBER: 28
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
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                                                                                                                                                                                                                                                                                                      63
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BERGSTROEM, Sven
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Pred. No. 3.8e-29;
0; Mismatches 1.
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Best Local Similarity 29.3%;
Matches 17; Conservative
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Best Local
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APPLICANT: Bredesen, l
APPLICANT: Rabizadeh,
                                                                           COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: Patentin Release #1.0, Version
CURRENT APPLICATION DATA:
                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                           STREET: 45.
STREET: 45.
CITY: San Diego
STATE: California
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ADDRESSEE: Campbell & Flores LLP
STREET: 4370 La Jolla Village Drive, Suite 700
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CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
ATTORNEY/AGENT INFORMATION
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FILING DATE: 24-NOV-1986
APPLICATION NUMBER: 650,128
FILING DATE: 13-SEP-1984
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 82,456
FILING DATE: 07-AUG-1987
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                                      APPLICATION NUMBER: US/09/041,886 FILING DATE:
                      CLASSIFICATION:
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17; Conserv
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                                                                                                                                                                                                              United States
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Pred. No. 1.1;
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REGISTRATION NUMBER: 31,815
REFERENCE/DOCKET NUMBER: P-ILECOMMUNICATION

P-LJ 2626

Campbell,

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                                                                 US-09-707-919A-19
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                                                                                                                                                                                              Patent No. 6623927

GENERAL INFORMATION:
FILE REFERENCE: US 443
                                                                                                                         SOFTWARE: PatentIn Ver. 2.1
SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE:
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/09648281 Patent No. 6515197 GENERAL INFORMATION:
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Best Local Similarity
    Matches
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TITLE OF INVENTION: Transgenic Animal Model of
TITLE OF INVENTION: Neurodegenerative Disease
FILE REFERENCE: P-CE 4336
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/648,281
CURRENT FILING DATE: 2000-08-24
NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/707,919A CURRENT FILING DATE: 2003-02-10
                                                                                                                                                          NUMBER OF SEQ ID NOS: 20
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INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: PRT
ORGANISM: Homo sapien
                                                                              ORGANISM: Homo
                                                                                               TYPE: PRT
                                                                                                            LENGTH: 1312
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                  Local
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                                                                                                                                                                                                                                                                                                                                                                       563 PSRYQSGPNSLPPRAATPTR---PPSRPPSRPSRPSHPS
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   l Similarity
16; Conserv
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16; Conserv
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              22.1%;
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40.0%;
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 Score 67.5; D
Pred. No. 6.4;
3; Mismatches
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Pred. No. 6
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Pred. No. 6.4;
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                             DB 4; Length 1312;
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RESULT 13
US-09-252-991A-18170
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                                                                                                                                                               Query Match
Best Local Similarity
Watches 16; Conserve
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Sequence 18170, Application US/09252991A
Patent No. 6551795
GENERAL INFORMATION:
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INFORMATION FOR SEQ ID NO:
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                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 612/305-1220
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ATTORNEY/AGENT INFORMATION:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Mueting, Raasch & Gebhardt, P.A. STREET: 119 No. 6673535th Fourth Street CITY: Minneapolis
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                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: McCormack,
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APPLICANT: MARC J. Rubenfield et al.
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEC
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILLING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-18
PRIOR FILING DATE: 1998-07-27

SEQUENCES RELATING TO PSEUDOMONAS

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5202236-7
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US-09-252-991A-21920
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APPLICANT: MAGGH, KATHY J.;ANDERSON, DAVID M.;STRAUSBERG,;SUSSN L.;MCCANDLISS, RUSS;WBI, TENA;FILPULA, DAVID
TITLE OF INVENTION: METHOD OF PRODUCING BIOADHESIVE;
                                                                            SEQ ID NO:7:
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SEQ ID NO 18170
LENGTH: 297
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Patent No. 6551795
GENERAL INFORMATION:
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Best Local Similarity 35.0%;
Query Match
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LENGTH: 822
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TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
FILE REFERENCE: 107196.136
CURRENT APPLICATION NUMBER: US/09/252,991A
CURRENT FILING DATE: 1999-02-18
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR APPLICATION NUMBER: US 60/074,788
PRIOR FILING DATE: 1998-02-18
PRIOR APPLICATION NUMBER: US 60/094,190
PRIOR FILING DATE: 1998-07-27
NUMBER OF SEQ ID NOS: 33142
                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 39
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/528,762
FILING DATE: 25-MAY-1990
                                                                                                                APPLICATION NUMBER: 82,456
FILING DATE: 07-AUG-1987
APPLICATION NUMBER: 933,945
FILING DATE: 24-NOV-1986
APPLICATION NUMBER: 650,128
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                                                                                             FILING DATE:
                                                            ENGTH: 86
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4; Mismatches 18; Indels
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Pred. No. 6.5;
5; Mismatches
    Score 64;
    DB 6;
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Search completed: September Job time: 37.5667 secs 1, 2004, 00:18:40

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Minimum
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| Cgn2 6/ptodata/2/pubpaa/US07 NEW PUB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US06 NEW PUB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US06 PUBCOMB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US07 NEW PUB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US08 PUBCOMB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US08 NEW PUB.pep:*
| Cgn2 6/ptodata/2/pubpaa/US08 PUBCOMB.pep:*
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APPLICANT:
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APPLICANT: Boldog, Ferenc L.
APPLICANT: Burgess, Catherine E
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ALIGNMENTS

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APPLICANT: VOSS, Edward Z.
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACT
FILE REFERENCE: 21402-050 CIP
CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT FILING DATE: 2003-02-10
PRIOR APPLICATION NUMBER: 60/303,168
PRIOR FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 60/368,996
PRIOR APPLICATION NUMBER: 60/368,996
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR FILING DATE: 2002-06-07
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APPLICANT:
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Shimkets, Richard A.
Spaderna, Steven K.
Spytek, Kimberly A.
Szekeres, Edward S. Jr.
Taupier, Raymond J. Jr.
Tohernev, Vellzar T.
Zerhusen, Bryan D.
Voss, Edward Z.
                                                                                                                                                                                                                                         ACIDS ENCODING SAME
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Lepley, Denise M. Liu, Xiaohong Mezick, Amanda J. Padigaru, Muralidhara

Patturajan, Med Rastelli, Luca

Meera

Burgess, Casman, S

Stacie J. Catherine E.

Grosse, William M. Gusev, Vladimir Y. Ji, Weizhen

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; TYPE: PRT ; ORGANISM: Homo sapiens US-10-190-115-50
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CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT FILING DATE: 2003-02-10
PRIOR APPLICATION NUMBER: 60/303,168
PRIOR FILING DATE: 2001-07-05
PRIOR FILING DATE: 2001-07-05
PRIOR FILING DATE: 2002-04-01
PRIOR PRIOR APPLICATION NUMBER: 60/366,816
PRIOR APPLICATION NUMBER: 60/366,816
PRIOR FILING DATE: 2002-06-07
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
PRIOR FILING DATE: 2000-07-03
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US-10-190-115-52
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PRIOR PILLING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/216,585,
PRIOR APPLICATION NUMBER: 60/216,586
PRIOR APPLICATION NUMBER: 60/216,586
PRIOR FILLING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR PILLING DATE: 2000-07-07
PRIOR PILLING DATE: 2000-07-17
PRIOR FILLING DATE: 2000-07-17
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SOFTWARE: CuraSeqList version 0.1
SEQ ID NO 50
LENGTH: 182
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TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REFERENCE: 21402-050 CIP
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APPLICANT: Boldog, Ferenc L.
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FILING DATE: 2000-07-03
APPLICATION NUMBER: 60/215,856
FILING DATE: 2000-07-03
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Boldog, Ferenc L.
Burgess, Catherine E.
Casman, Stacie J.
Grosse, William M.
Gusev, Vladimir Y.
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Taupier, Raymond J. Jr.
Tchernev, Velizar T.
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Vo. US20030207394A1
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APPLICANT: Tchernev, Velizar T.

APPLICANT: Vess, Edward Z.

APPLICANT: Vess, Edward Z.

TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME
FILE REFERENCE: 21402-050 CIP
CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT FILING DATE: 2003-02-10
PRIOR APPLICATION NUMBER: 60/303,168
PRIOR APPLICATION NUMBER: 60/303,168
PRIOR FILING DATE: 2001-07-05
PRIOR FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 60/368,996
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/316,816
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NUMBER OF SEQ ID NOS: 136
SOFTWARE: CuraSeqList version 0.1
SEQ ID NO 52
SEQ ID NO 52
LENGTH: 182
TYPE: PRT
RCANISM: Homo sapiens
US-10-190-115-52
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Publication No.
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Best Local
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APPLICANT: Boldog, Ferenc L.
APPLICANT: Burgess, Catherine E
APPLICANT: Casman, Stacie J.
APPLICANT: Grosse, William M.
APPLICANT: Gusev, Vladimir Y.
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PRIOR FILING DATE: 2001-07-07
PRIOR PPLICATION NUMBER: 60/216,722
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
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PRIOR APPLICATION NUMBER: 60/215,902
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/216,585,
PRIOR FILING DATE: 2000-07-07
PRIOR FILING DATE: 2000-07-07
                                               PRIOR
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                  APPLICATION NUMBER: 60/215,856 FILING DATE: 2000-07-03
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Shimkets, Richard A.
Spaderna, Steven K.
Spytek, Kimberly A.
Szekeres, Edward S. Jr.
Taupier, Raymond J. Jr.
Tchernev, Velizar T.
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No. US20030207394A1
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Rastelli, Luca
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Padigaru, Muralidhara
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NUMBER: 60/215,902
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SEQ ID NO 53
LENGTH: 182
                                                            Matches
                                                                         Query Match
Best Local
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SOFTWARE: CuraSeqList version 0.1
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PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,586
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                                                                                                                                  NAME/KEY: misc feature
LOCATION: (29)...(29)
OTHER INFORMATION: Wherein Xaa may be
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LOCATION: (19)..(19)
OTHER INFORMATION: Wherein
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ORGANISM: Homo sapiens
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OTHER INFORMATION: Wherein
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LOCATION: (25)..(25)
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OTHER INFORMATION: Wherein
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OTHER INFORMATION: Wherein Xaa may
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LOCATION: (22)..(22)
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OTHER INFORMATION: Wherein
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LOCATION: (28)..(28)
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OTHER INFORMATION: Wherein
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LOCATION: (21)..(21)
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JOCATION: (23)..(23)
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APPLICATION NUMBER: 60/216,722
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63
                1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
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                                                                         Similarity
YQRRPAIAINNFYVPRTYYANBAVVRPHAQIFQRQYLPNSHPFTVVRRPNLHPSF 117
                                                       100.0%; (larity 100.0%; )
Conservative 0;
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                                                       Score 305; DB 15;
Pred. No. 1.5e-26;
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                                                          Indels
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RESULT 4 US-10-369-072-50

Sequence

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Application US/10369072

US-10-369-072-52 ; Sequence 52, Application US/10369072 ; Publication No. US20040014081A1

GENERAL INFORMATION:
APPLICANT: Alsobrook II, John
APPLICANT: Spaderna, Stephen
APPLICANT: Tchernev, Velizar
APPLICANT: Liu, Xiaohong

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Shenoy, Suresh Spytek, Kimberly Zerhusen, Bryan RESULT 5

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APPLICANT: Burgess, Catherine E
APPLICANT: Shimkets, Richard
APPLICANT: Shimkets, Richard
APPLICANT: Shimkets, Richard
APPLICANT: Shimkets, Richard
TITLE OF INVENTION: NO. US20040014081A1e1 Proteins and
FILE REPERENCE: 21402-050 CON2
CURRENT APPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR FILING DATE: 2002-06-17
PRIOR APPLICATION NUMBER: 09/89,994
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR PILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,902
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                                                                                                                                                                              ; TYPE: PRT ; ORGANISM: Homo sapiens US-10-369-072-50
                                                                                                              Query Match
Best Local
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                                                                                        Matches
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GENERAL INFO
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APPLICANT: Spaderna, Stephen
APPLICANT: Tchernev, Velizar
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NUMBER OF SEQ ID NOS: 100
SOFTWARE: PatentIn Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/216,722
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
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PRIOR APPLICATION NUMBER: 60/218,992
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PRIOR APPLICATION NUMBER: 60/216,585
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63
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                            1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                                                                                                                Similarity
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Szerkeres, Edward S
Lepley, Denise M
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Rastelli, Luca
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Spytek, Kimberly
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Patturajan, Meera
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                                                                                        Conservative
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                                                                                      Score 305; DB 15;
Pred. No. 1.5e-26;
Mismatches 0;
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                                                                                                                              Length
                                                                                        Indels
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PRIOR APPLICATION NUMBER: 10/174,372
PRIOR FILING DATE: 2002-06-17
PRIOR PPLICATION NUMBER: 09/898,994
PRIOR PPLICATION NUMBER: 09/898,994
PRIOR PILING DATE: 2001-07-03
PRIOR PPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
PRIOR PPLICATION NUMBER: 60/215,856
PRIOR PPLICATION NUMBER: 60/215,902
PRIOR PPLICATION NUMBER: 60/215,902
PRIOR PILING DATE: 2000-07-03
PRIOR PILING DATE: 2000-07-07
PRIOR FILING DATE: 2000-07-07
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NUMBER OF SEQ ID NOS: 100
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 52
LENGTH: 182
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PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 60/218,992
PRIOR FILING DATE: 2000-07-17
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APPLICANT: Spaderna, Stephen K
APPLICANT: Tchernev, Velizar
APPLICANT: Liu, Xiaohong
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APPLICANT: Padigaru, Muralidhara
TITLE OF INVENTION: No. US20040014081A1el Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-050 CON2
FILE REFERENCE: 2000-050 CON2
FILE R
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Similarity 100.0%; Prod. No. 1.5e-26;
0; Mismatches 0;
                                                                                                                    Rastelli, Luca
Grosse, William M
Szerkeres, Edward
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Spytek, Kimberly
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Taupier, Raymond
                                        Shen,
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Taupier, Raymond T
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Catherine E
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RESULT 7
US-10-190-115-51
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, NAME/KEY: VARIANT
; LOCATION: (19)..(29)
; OTHER INFORMATION: Wherein Xaa is any amino acid/
US-10-369-072-53
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SEQ ID NO 53
LENGTH: 182
TYPE: PRT
ORGANISM: Homo sapiens
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PRIOR FILING DATE: 2000-07-03
PRIOR PELICATION NUMBER: 60/216,585
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,586
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 60/218,92
                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Alsobrook,
APPLICANT: Boldog, Fe
APPLICANT: Burgess, C
APPLICANT: Casman, St
APPLICANT: Grosse, Wi
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Best Local Similarity
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TITLE OF INVENTION: No. US20040014081A1el Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-050 CON2
CURRENT APPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR FILING DATE: 2002-06-17
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PRIOR APPLICATION NUMBER: 60/215,856
PRIOR FILING DATE: 2000-07-03
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PRIOR FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
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Burgess, Catherine
Casman, Stacie J.
Grosse, William M.
Gusev, Vladimir Y.
Spytek, Kimberly A. Szekeres, Edward S. . Taupier, Raymond J. . Tchernev, Velizar T.
                                                                                      Shimkets, Richard A. Spaderna, Steven K.
                                                                                                                                  Shenoy, Suresh G.
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Rastelli, Luca
                                                                                                                                                                                                                           Padigaru, Muralidhara
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100.0%; Pred. No. 1.5e-26;
tive 0; Mismatches 0;
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RESULT 8
US-10-369-072-51
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US-10-190-115-51
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SEQ ID NO 51
LENGTH: 182
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APPLICANT: Alsobrook II, John P
APPLICANT: Spaderna, Stephen K
APPLICANT: Toherney, Velizar
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Best Local :
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Publication No.
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PRIOR FILING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 60/368,996
PRIOR FILING DATE: 2002-04-01
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR FILING DATE: 2002-06-07
PRIOR FILING DATE: 2002-06-07
APPLICANT: Burgess, Catherine E
APPLICANT: Shinkets, Richard
APPLICANT: Shinkets, Richard
APPLICANT: Padigaru, Muralidhara
TITLE OF INVENTION: No. US20040014081A1el Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-050 CON2
CURRENT PPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR APPLICATION NUMBER: 09/898,994
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PRIOR FILING DATE: 2001-07-07
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR FILING DATE: 2000-07-07
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FILE REFERENCE: 21402-050 CIP
CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT FILING DATE: 2003-02-10
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APPLICATION NUMBER: 60/215,902
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                                                                                                                                                                                                                                                                           Rastelli, Luca
Grosse, William M
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to. US20040014081A1
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Taupier, Raymond T
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Spytek, Kimberly
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98.2%;
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ard Z.
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Pred. No. 9.3e-26;
0; Mismatches 1;
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RESULT 9
US-10-190-115-99
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PRIOR APPLICATION NUMBER: 60/216,585
PRIOR FILING DATE: 2000-07-07
PRIOR PPLICATION NUMBER: 60/216,586
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR PILING DATE: 2000-07-07
PRIOR PILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR APPLICATION NUMBER: 60/218,92
PRIOR FILING DATE: 2000-07-17
PRIOR FILING DATE: 2000-07-17
PRIOR FILING DATE: 2000-07-17
                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
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                                                                                                                                                                                                                            Matches
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PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,856
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/216 000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 100
                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 182
                                                                                                                  63
                                                                                                                                                                                                                         54;
                                                                                                                                                         1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                                                                                                            YORRPAIAINNPYVPRTYYANPAVVRPHAQIPORQYLPNSHPPTVVRLPNLHPSF 117
                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                    97.7%;
                                                                                                                                                                                                                                                    Score 298; DB 15;
Pred. No. 9.3e-26;
                                                                                                                                                                                                                            Mismatches
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Sequence 99, Application US/10190115
Publication No. US20030207394A1
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TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING SAME FILE REFERENCE: 21402-050 CIP CURRENT APPLICATION UNMERR: US/10/190,115 CURRENT FILING DATE: 2003-02-10 PRIOR APPLICATION NUMBER: 60/303,168 PRIOR FILING DATE: 2001-07-05 PRIOR PRIOR DATE: 2001-07-05 PRIOR APPLICATION NUMBER: 60/368,996 PRIOR APPLICATION NUMBER: 60/368,996 PRIOR FILING DATE: 2002-04-01 PRIOR APPLICATION NUMBER: 60/366,816 PRIOR FILING DATE: 2002-04-01 PRIOR APPLICATION NUMBER: 60/386,816 PRIOR FILING DATE: 2002-04-01 PRIOR APPLICATION NUMBER: 60/386,816 PRIOR FILING DATE: 2002-06-07
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APPLICANT:
APPLICANT:
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Shimkets, Richard A.
Spaderna, Steven K.
Spytek, Kimberly A.
Szekeres, Edward S. Jr.
Taupier, Raymond J. Jr.
Tohernev, Velizar T.
Zerhusen, Bryan D.
Voss, Edward Z.
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Padigaru, Muralidhara
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Rastelli, Luca
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Liu, Xiaohong
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erenc L.
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APPLICANT: Burgess, Catherine B
APPLICANT: Baddests, Richard
APPLICANT: Shimkets, Richard
APPLICANT: Shimkets, Richard
APPLICANT: Baddigaru, Muralidhara
TITLE OF INVENTION: No. US20040014081A1el Proteins and
FILE REFERENCE: 21402-050 CON2
CURRENT APPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR TILING DATE: 2002-06-17
PRIOR APPLICATION NUMBER: 09/898,994
PRIOR APPLICATION NUMBER: 09/898,994
PRIOR APPLICATION NUMBER: 09/215,854
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,856
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,856
PRIOR APPLICATION NUMBER: 60/215,902
PRIOR APPLICATION NUMBER: 60/215,902
PRIOR APPLICATION NUMBER: 60/215,902
PRIOR APPLICATION NUMBER: 60/215,902
PRIOR APPLICATION NUMBER: 60/215,905
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PRIOR FILING DATE: 2000-07-17

Remaining Prior Application data removed - See File Wrapper or PALM.

NUMBER OF SEQ ID NOS: 136

SOFTWARE: CuraSeqList version 0.1

SEQ ID NO 99
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APPLICANT:
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ENERAL INFORMATION:
APPLICANT: Alsobrook II, John P
APPLICANT: Spaderna, Stephen K
**DDTTCANT: TChernev, Velizar
***TCANT: Tcherney, Velizar
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APPLICANT:
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OR FILING DATE: 2000-07-03
OR APPLICATION NUMBER: 60/216,585,
OR FILING DATE: 2000-07-07
OR APPLICATION NUMBER: 60/216,586
OR FILING DATE: 2001-07-07
OR APPLICATION NUMBER: 60/216,722
OR APPLICATION NUMBER: 60/216,722
OR FILING DATE: 2000-07-07
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APPLICATION NUMBER: 60/215,856
FILING DATE: 2000-07-03
                                          APPLICATION NUMBER: 60/216,586
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Similarity 74.5%;
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Grosse, William M
Szerkeres, Edward
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Spytek, Kimberly
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No. US20040014081A1
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NUMBER: 60/216,722
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                           2000-07-07
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Pred. No. 4.1e-18;
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, OTHER INFORMATION: Description of Artificial Sequence: Domain search
, OTHER INFORMATION: result
US-10-369-072-99
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                PRIOR APPLICATION NUMBER: 60/303,168
PRIOR FILLING DATE: 2001-07-05
PRIOR APPLICATION NUMBER: 60/368,996
PRIOR FILLING DATE: 2002-04-01
PRIOR FILLING DATE: 2002-06-07
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILLING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,856
PRIOR APPLICATION NUMBER: 60/215,905
PRIOR APPLICATION NUMBER: 60/215,905
PRIOR FILLING DATE: 2000-07-03
PRIOR FILLING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/216,585,
PRIOR PRIOR APPLICATION NUMBER: 60/216,585,
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LENGTH: 181
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Best Local Similarity 74.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Alsobrook, John P. II
APPLICANT: Boldog, Ferenc L.
APPLICANT: Burgess, Catherine E..
APPLICANT: Casman, Stacie J.
APPLICANT: Grosse, William M.
APPLICANT: Gusey, Vladimir Y.
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PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
PRIOR APPLICATION NUMBER: 60/218,992
PRIOR FILING DATE: 2000-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Voss, Edward Z.
TITLE OF INVENTION: NOVEL PROTEINS AND NUCLEIC ACIDS ENCODING
FILE REFERENCE: 21402-050 CIP
CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT FILING DATE: 2003-02-10
CURRENT FILING DATE: 2003-02-10
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION
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Szekeres, Edward S. Jr.
Taupier, Raymond J. Jr.
Tchernev, Velizar T.
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Patturajan, Meera
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2000-07-
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Pred. No. 4.1e-18;
4; Mismatches 10;
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; LENGTH: 181
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-190-115-20
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Best Local
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APPLICANT: Spaderna, Stephen K
APPLICANT: Tohernev, Velizar
                                                                                                                             PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,722
                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 09/898,994
PRIOR FILING DATE: 2001-07-03
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
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CURRENT APPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
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PRIOR APPLICATION NUMBER: 60/216,722
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
PRIOR FILING DATE: 2000-07-17
Remaining Prior Application data removed NUMBER OF SEQ ID NOS: 100
                                    PRIOR FILING DATE: 2000-07-
                                                         PRIOR APPLICATION NUMBER: 60/218,992
                                                                           PRIOR APPLICATION NUMBER: 60/218,622
                                                                                                                   PRIOR FILING DATE: 2000-07-07
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PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 2000-07-03
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                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/215,856
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                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/215,902
                                                                                                                                                                    APPLICATION NUMBER: 60/216,586
                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                             APPLICATION NUMBER: 60/216,585
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Grosse, William M
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Spytek, Kimberly
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              See File Wrapper or PALM
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RESULT 13
US-10-190-115-54
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; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-369-072-20
                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 21402-050 CIP
CURRENT APPLICATION NUMBER: US/10/190,115
CURRENT TILING DATE: 2003-02-10
PRIOR APPLICATION NUMBER: 60/303,168
PRIOR FILING DATE: 2001-07-05
PRIOR PELICATION NUMBER: 60/368,996
PRIOR PELICATION NUMBER: 60/386,986
PRIOR APPLICATION NUMBER: 60/386,816
PRIOR APPLICATION NUMBER: 60/386,816
                                                                                                                 PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/216,585,
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/216,586
PRIOR APPLICATION NUMBER: 60/216,586
PRIOR FILING DATE: 2001-07-07
PRIOR APPLICATION NUMBER: 60/216,722
PRIOR FILING DATE: 2000-07-07
PRIOR APPLICATION NUMBER: 60/218,622
PRIOR FILING DATE: 2000-07-17
                              Remaining Prior Application data removed
NUMBER OF SEQ ID NOS: 136
SOFTWARE: CuraSeqList version 0.1
SEQ ID NO 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 45; Conserv
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Publication No.
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LENGTH: 1:
TYPE: PRT
                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/215,856
PRIOR FILING DATE: 2000-07-03
PRIOR APPLICATION NUMBER: 60/215,902
                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 2002-06-07
PRIOR APPLICATION NUMBER: 60/215,854
PRIOR FILING DATE: 2000-07-03
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                   182
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Shimkets, Richard A.
Spaderna, Steven K.
Spytek, Kimberly A.
Szekeres, Edward S. Jr.
Taupier, Raymond J. Jr.
Tchernev, Velizar T.
Zerbusen, Bryan D.
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Padigaru, Muralidhara
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81.8%;
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Pred. No. 1.3e-17;
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                                                                                              See File Wrapper or PALM
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ORGANISM: Homo sapiens

US-10-190-115-54

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                                           S
                                                                                                                                                      LENGTH: 182; TYPE: PRT; ORGANISM: Homo sapiens US-10-369-072-54
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                                                                                     Matches
                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                 SEQ ID NO 54
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                                                                                                                                                                                                                                            Remaining Prior Application data removed - See File Wrapper or PALM. NUMBER OF SEQ ID NOS: 100 SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: PAdigaru, Muralidhara
APPLICANT: Padigaru, Muralidhara
TITLE OF INVENTION: No. US20040014081A1el Proteins and Nucleic Acids Encoding Same
FILE REFERENCE: 21402-050 CON2
CURRENT APPLICATION NUMBER: US/10/369,072
CURRENT FILING DATE: 2003-02-18
PRIOR APPLICATION NUMBER: 10/174,372
PRIOR APPLICATION NUMBER: 10/174,372
                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/218,992
PRIOR FILING DATE: 2000-07-17
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LICANT: Spaderna, Stephen K
LICANT: Tchernev, Velizar
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APPLICATION N
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ILING DATE: 2000-07-07
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                 63
                                                                                                                                                                                                                                                                                                                                        PLICATION NUMBER: 60/218,622
LING DATE: 2000-07-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PLICATION NUMBER: 60/215,902
LING DATE: 2000-07-03
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LING DATE: 2000-07-07
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LING DATE: 2000-07-03
                                                                                   Similarity 58.2
32; Conservative
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                                           YORRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                 YOHRLAVPINNOFIPYPNYAKPVAIRLHAQIPOCOALPNIDPPTVERRPRPRPSF 117
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Grosse, William M
Szerkeres, Edward
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Spytek, Kimberly
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Pred. No. 8.6e-11;
4; Mismatches 19;
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Pred. No. 8
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; OTHER INFORMATION: Clone ID: PAT_MRT3847_81858C.1.pep
US-10-424-599-265601
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CURRENT FILING DATE: 2003-04-28
NUMBER OF SEQ ID NOS: 285684
SEQ ID NO 265601
LENGTH: 164
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Publication No. US20040031072A1
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Best Local
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APPLICANT:
APPLICANT:
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TITLE OF INVENTION: Soy Nucleic Acid Molecules and Other Molecules Associated
TITLE OF INVENTION: Plants and Uses Thereof for Plant Improvement
FILE REFERENCE: 38-21(53223)B
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APPLICANT: Kovalic David K
APPLICANT: Zhou Yihua
                                                                                                                                                                                                                                                                                                                      NAME/KEY: unsure
LOCATION: (1)..(164)
OTHER INFORMATION: unsure at all Xaa locations
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ORGANISM: Glycine max
FEATURE:
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7; Mismatches 17; Indels 3
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ALIGNMENTS

A; Molecule type: mRNA
A; Molecule type: mRNA
A; Molecule type: mRNA
A; Residues: 1-182 <BERv
A; Residues: 1-182 <BERv
A; Residues: 1-182 <BERv
A; Residues: EMBL: X66417; NID: g29675; PIDN: CAA47048.1; PID: g29676
A; Experimental source: Lactating mammary gland
A; Experimental source: Lactating mammary gland
A; Mote: sequence extracted from NCBI backbone (NCBIP: 128264)
A; Note: sequence extracted from NCBI backbone (NCBIP: 128264) A,Note: the amino-terminal residue forms pyrrolidone carboxylic acid; therefore, we have R;Fiat, A.M.; Jolles, J.; Aubert, J.P.; Loucheux-Lefebvre, M.H.; Jolles, P. Eur. J. Biochem. 111, 333-33, 1980.

A;Title: Localisation and importance of the sugar part of human casein.

A;Reference number: A16604; MUID:81114144; PMID:7460900

A;Accession: A16604

A;Molecule type: protein

A;Residues: 118-160, 'TT', 163-172, 'P', 174-177, 'PTTS', 182 <FIA
A;Residues: 118-160, 'TT', 163-172, 'P', 174-177, 'PTTS', 182 <FIA
C;Comment: This protein is only a minor component in human milk, whereas it is a cows mi A; Map position: 4q21.1-4q21.1
A; Introns: 18/3; 29/3
C; Keywords: kappa-casein
C; Keywords: glycoprotein; mammary gland; milk; pyroglutamic
F; 1-22/Domain: signal sequence #status predicted <SIG>F; 23-182/Product: kappa-casein #status experimental <MAT> R;Bergstroem, S.; Hansson, L.; Hernell, O.; Loennerdal, B.;
DNA Seq. 3, 245-246, 1992
A;Title: Cloning and sequencing of human kappa-casein cDNA.
A;Reference number: A56638, MUID:93208373, PMID:1296818
A;Accession: A56638 R;Brignon, G.; Chtourou, A.; Ribadeau-Dumas, B. FEBS Lett. 188, 48-54, 1985
A;Title: Preparation and amino acid sequence of human kappa-casein. A;Reference number: A24001; MUID:85258132; PMID:4018271
A;Accession: A24001 A;Residues: 1-182 <EDL>
A;Residues: 1-182 <EDL>
A;Cross-references: GB:U51899; NID:gl245481; PIDN:AAC50772.1; PID:gl2
D:Rergstroem, S.; Hansson, L.; Hernell, O.; Loennerdal, B.; Nilsson, C;Species: Homo sapiens (man)
C;Date: 31-Mar-1988 #sequence revision 03-Oct-1995 #text_change
C;Accession: JC4957; A56638; A24001; A16604; S22070
R;Edlund, A.; Johansson, T.; Leidvik, B.; Hansson, L.
Gene 174, 65-69, 1996 A;Gene: GDB:CSN10; casK; CSN3; KcA;Cross-references: GDB:5916337; C; Genetics: A; Molecule type: protein A; Residues: 'E', 25-26, 28-123 < BRI> A;Title: Structure of the ht A;Reference number: JC4957; A;Accession: JC4957 casein kappa precursor [validated] N;Alternate names: kappa-casein N;Contains: caseinoglycopeptide A; Molecule type: DNA human kappa-casein gene. 7; MUID:97017129; PMID:8863730 ; Kca 37; OMIM:601695 PID:g1245482 08-Dec-2000 Stroemqvist,

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A;Note: the amino-terminal residue appears to be pyrrolidone carb R;Mercier, J.C.; Addeo, F.; Pelissier, J.P. Biochimie 58, 1303-1310, 1976
A;Title: Structure primaire du caseinomacropeptide de la caseine A;Reference number: A90670; MUID:77112689; PMID:1016651
A;Recession: A90670
A;Molecule type: protein A;Roesidues: 106-171 <ME2>
A;Note: 119-Val was also found A;Note: Ser-151 and Ser-168 are phosphorylated
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C;Species: Sus scrofa domestica (domestic pig)
C;Date: 19-Nov-1993 #sequence_revision 18-Nov-1994 #text_change 13-Aug-1999
C;Accession: A48382; A12717
C;Accession: A48382; A12717
R;Levine, W.B.; Alexander, L.J.; Hoganson, G.E.; Beattie, C.W.
Anim. Genet. 23, 361-363, 1992
A;Fitle: Cloning and sequencing of the porcine kappa-casein cDNA.
A;Reference number: A48382; MUID:92367959; PMID:1503275
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F;23/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form)
F;117-118/Cleavage site: Phe-Ile (chymosin) #status experimental
F;133,143,148,151,157,167,169,178,181/Binding site: carbohydrate (Thr)
F;162/Binding site: carbohydrate (Ser) (covalent) #status experimental
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A; Residues: 118-188 <CHO>
C; Superfamily: barre
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C;Date: 24-Apr-1984 #sequence revision 24-Apr
C;Accession: A94479; A90670; A03114
R;Mercier, J.C.; Addeo, F.; Pelissier, J.P.
unpublished results, cited by Mercier, J.C., C
A;Description: Comparative study of the amino
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A;Molecule type: nucleic acid
A;Residues: 1-188 <LEV>
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A; Residues: 1-171 <ME1>
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A;Accession: A94479
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30; Conservative
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Pred. No. 6.4e-11;
5; Mismatches 20
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C;Comment: Chymosin hydrolyzes the peptide bond between Phe-105 and Met-106. C;Superfamily: kappa-casein C;Keywords: mammary gland; milk; phosphoprotein
A;Cross-references: GB:X00565; NID:g170; R;Gorodetskii, S.I.; Kaledin, A.S. Sov. Genet. 23, 398-404, 1987
                                                                                                              A,Cross-references: EMBL:X14907; NID:g177; PIDN:CAA33034.1; PID:g1228078 R;Stewart, A.F.; Willis, I.M.; Mackinlay, A.G. Nucleic Acids Res. 12, 3895-3907, 1984 A;Title: Nucleotide sequences of bovine alpha-s1- and kappa-casein cDNAs. A,Reference number: A93517; MUID:84221403; PMID:6328443 A;Concents: A variant
                                                                                                                                                                                                                                                                                                                                                                                      C;Species: Bos primigenius taurus (cattle)
C;Date: 24-Apr-1984 #sequence_revision 23-Mar-1995 #text_change 16-Jun-2000
C;Accession: S02076; B23071; S06376; JN0364; A91206; A90033; A90920; A91634; A90592; A60
R;Alexander, L,J.; Stewart, A.F.; Mackinlay, A.G.; Kapelinskaya, T.V.; Tkach, T.M.; Goro
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A; Residues: 1-192 <COL>
A; Cross - references: EMBL: X60763;
C; Superfamily: kappa-casein
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submitted to the EMBL Data
A;Reference number: S15513
A;Accession: S15513
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C;Species: Capra aegagrus hircus (dome:
C;Date: 20-Feb-1995 #sequence_revision
C;Accession: S15513
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Bur. J. Biochem. 178, 395-401, 1998
A;Title: Isolation and characterization of
A;Reference number: S02076; MUID:89091174;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Superfami.
C; Keywords:
                                                            A; Molecule type: mRNA
A; Residues: 1-190 <STE>
                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-190 < ALE>
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                                                                                                                                                                                                                                                                                      A; Accession: S02076
                                                                                                                                                                                                                                                                                                            A; Contents: A variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      kappa-casein
                                                                                                      A;Accession: B2307
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vision 20-Feb-1995
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Pred. No. 2e-07;
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Pred. No. 1.8e-07;
6; Mismatches 21
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                                             PIDN: CAA25231.1;
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A; Molecule type: protein
A; Residues: 128-190 <GRO>
A; Note: article in French with
R; Jolles, J.; Schoentgen, F.; A
Chimia 26, 645-646, 1972
A; Reference number: A90920
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A; Nolecule type: mRNA
A; Nolecule type: mRNA
A; Residues: 92-156; I',158-168,'A',170-173,'T',175-190 <GO2>
A; Cross-references: GB: M38333; NID:g162806; PIDN:AAA30432.1;
A; Note: the authors translated the codon TTG for residue 100
A; Mercier, J.C.; Brignon, G.; Ribadeau-Dumas, B.
Eur. J. Biochem. 35, 222-235, 1973
                                                                               Biochim. Biophys. Acta 995, 221-224, 1989
A;Title: Specificity of milk-clotting enzymes towards bovine kappa-casein.
A;Reference number: S03993; MUID:89207571; PMID:2495817
                                                                                                                                                    A;Molecule type: protein
A;Residues: 128-156, I',158-168,'A',170-190 <ME2>
A;Residues: 128-156, I',158-168,'A',170-190 <ME2>
A;Note: article in French with English abstract
R;Drohse, H.B.; Foltmann, B.
                                                                                                                                                                                                                                                                                                                                                           A;Experimental source: colostrum R;Mercier, J.C.; Uro, J.; Ribadeau-Dumas, B.; Grosclaude, Eur. J. Biochem. 27, 535-547, 1972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Guerin, J.; Alais, C.; Jolles, J.; Jolles, Biochim. Biophys. Acta 351, 325-332, 1974
A;Title: Kappa-Casein from bovine colostrum.
A;Reference number: A90592; MUID:74269749; P)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: protein
A;Residues: 22-101,'D',103-156,'I',158-168,'A',170-190
R;Guerin, J.; Alais, C.; Jolles, J.; Jolles, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 22,'Q',24-25,'E',27,'E',29-126 <JO2>
A;Residues: 22,'Q',24-25,'E',27,'E',29-126 <JO2>
R;JOlles, J.; Schoentgen, F.; Alais, C.; Fiat, A.M.; Jolles, P.
Helv. Chim. Acta 55, 2872-2883, 1972
Helv. Chim. Acta 55, 2872-2883, 1972
A;Title: Studies on the primary structure of cow kappa-casein.
A;Reference number: A91634; MUID:73124636; PMID:4653404
A;Contents: B variant
                                                          A; Reference number: A; Accession: S03993
                                                                                                                                                                                                                                                                                                        A; Title: Structure primaire du caseinomacropeptide de la A; Reference number: A60833; MUID:72254481; PMID:4559180
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A;Residues: 1-138,'G',140-156,'I',158-168,'A',170-173,'T',175-
R;Gorodetsky, S.I.; Kershulite, D.D.; Korobko, B.G.
Bioorg. Khim. 9, 1693-1694, 1983
A;Title: Primary structure of cDNA of Bos taurus kappa-casein
A;Reference number: JN0364; MUID:85022828; PMID:6689612
A;Contents: B2 variant
                                                                                                                                                                                                                                                           A; Accession: A60833
                                                                                                                                                                                                                                                                                                                                                                                                                             A;Molecule type: protein
A;Residues: 127-156,'I',158-168;187-190 <GUE>
                                                                                                                                                                                                                                                                                   A;Contents: B variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Accession: A90592
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A; Molecule type:
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A; Residues: 22-101, 'D', 103-127 <MER>
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A;Reference number: A91206; MUID:73216467; PMID:4577852
A;Contents: B variant
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          Molecule type: protein
Residues: 126-130 <DRO:
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Contents: B2 variant
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lais, C.; Jolles,
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YQQRPVALINNQFLPYPYYAKPVAVRSPAQTLQWQVLPNAVPAKSCQDQPTAMARHPHPH
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C;Species: Ovis orientalis aries, Ovis ammon aries (dom C;Date: 24-Apr:1984 #sequence revision 30-Sep-1991 #tex C;Accession: S14711; A03113; A90597; S08655 R;Furet, J.P.; Mercler, J.C.; Soulier, S.; Gaye, P.; Hu: Nucleic Acids Res. 18, 5286, 1990 A;Title: Nucleotide sequence of ovine kappa-casein cDNA. A;Reference number: S14711; MUID:90384837; PMID:2402453 A;Accession: S14711
                                                                                                                                                             A;Molecule type: protein
A;Residues: 127-192 <00L2>
G;Superfamily: kappa-casein
G;Keywords: glycoprotein; mammary gland; milk; phosphoprotein
G;Keywords: signal sequence #status predicted <SIG>
F;1-21/Domain: signal sequence #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 27,07,24-27,52,29-129 <JOL1>
R;Jolles, J.; Fiat, A.M.; Schoentgen, F.; Alais, C.; Jolles,
R;Jolles, J.; Fiat, A.M.; Schoentgen, F.; Alais, C.; Jolles,
Biochim. Biophys. Acta 365, 335-343, 1974
A;Title: The amino acid sequence of sheep kappa-A-casein. II.
A;Reference number: A90597, MUID:75036120; PMID:4429673
A;Accession: A90597
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: EMBL:X51822; NID:g1293; PIDN:CAA36122.1; PID:g1294 R;JOlles, J.; Schoentgen, F.; Hermann, J.; Alais, C.; Jolles, P. Eur. J. Biochem. 46, 127-132, 1974 P.;Title: The sequence of sheep kappa-casein: primary structure of para A;Reference number: A91221; MUID:74309256; PMID:4605338
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;152/Binding site: carbohydrate (IIII, (COVILLE)
F;170/Binding site: phosphate (Ser) (covalent)
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Genetika 23, 398-404, 1987
A;Title: Analysis of nucleotide sequence of bovine kappa-casein
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A; Residues: 1-192 < FUR >
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A;Cross-references: GB:M36641; NID:g162810; PIDN:AAA30433.1;
C;Comment: The sequence shown is the A variant.
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A; Accession: I45875
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27; Conserv
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YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNS--
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44.4%;
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Pred. No. 3.4e-07
7; Mismatches 20
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                                                                                           DB 1;
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A;Experimental source: mammary gland R,Bosze, Z.Z.; Devinoy, E.E.; Pulssant, C.C.; Fontaine, M.M.L.; Houdebine, L.L.M. submitted to the EMBL Data Library, November 1992 A;Description: Characterization of the rabbit kappa-casein cDNA: in vivo and in A;Reference number: S31623 A;Accession: S31623
                                                                                                                                                                                                                                                                                                                                   RESULT 8
$12092
kappa-casein precursor - guinea pig
C;Species: Cavia porcellus (guinea pig)
C;Date: 21-Nov-1993 #sequence_revision 10-Nov-1995 #text_change 13-Aug-1999
C;Accession: $12092
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A;Residues: 55,'HT',58-165,'R',167 <DAW>
A;Cross-references: EMBL:X76910; NID:g439523; PIDN:CAA54232.1; PID:g439524
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A; Residues: 1-180 <BOS>
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A; Residues: 1-180 < BAR>
                                                                                         A;Molecule type: mRNA
A;Residues: 1-234 <HAL>
A;Cross-references: EMBL:X56
C;Superfamily: kappa-casein
                                                                                                                                                                                                             Nucleic Acids Res. 18, 6129, 1990
A;Title: Nucleotide sequence of guinea-pig kappa-casein cDNA A;Reference number: S12092; MUID:91045081; PMID:2235497
A;Accession: S12992
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                                                                                                                                                                                           A;Status: preliminary
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Status: preliminary
                         Query Match
Best Local
                                                                                                                   Cross-references: EMBL:X56020; NID:g49430; PIDN:CAA39497.1; PID:g49431
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Best Local (
  Matches
                       Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64
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Similarity 36. 20; Conservative
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Similarity 43.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YORRPAIAINNEYVPRTYYANPAVVRPHAQIPORQYLPNSHEPTVVRRPNLHESE
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                         30.5%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 119; DB 2;
Pred. No. 2.5e-06;
7; Mismatches 22
  Score 93; DB 2; Length 234
Pred. No. 0.0029;
7; Mismatches 28; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 180;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
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       Gaps
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C; Access
R; Bown,
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G;Date: 31-Mar-1990 #sequence_revision 31-Mar-1990 #text_change 10-Sep-1999
C;Accession: A3337
R;Wechsler, S.L.; Nesburn, A.B.; Zwaagstra, J.; Ghiasi, H.
Virology 168, 168-172, 1989
A;Title: Sequence of het latency-related gene of herpes simplex virus type 1
A;Reference number: A94388; MUID:89085598; PMID:2535901
A;Accession: A33337
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT
T06482
                                                                                                                                                                                                                                                                                                                     C;Superfamily: herpesvirus latency-related C;Keywords: tandem repeat F;26-41/Region: 16-residue tandem repeat F;42-57/Region: 16-residue tandem repeat F;58-73/Region: 16-residue tandem repeat
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R;Bown, D.P.
submitted to the EMBL Data Library, June 1992
A;Reference number: Z15888
A;Accession: T06482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               probable cell wall protein - garden pea
C;Species: Pisum sativum (garden pea)
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 20-Jun-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
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cell wall protein - alfalfa
C;Species: Medicago sativa (alfalfa)
C;Date: 14-Jul-1995 #sequence_revision
C;Accession: S52985
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A;Molecule type: mRNA
A;Residues: 1-340 <AREC>
A;Cross-references: GB:J04323; NID:g330133; PIDN:AAA45799.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Species: human herpesvirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A;Gene: ptxA
C;Superfamily: hydroxyproline-rich glycoprotein
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A;Experimental source: cv. Purple Podded
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-352 < BOW >
                                                                                                  RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                             A; Introns: 249/2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   latency-related protein 1 - human herpesvirus 1 (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genetics:
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
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                                                                                                                                                                                                   PYVPRTYYANPAVVRPHAQIPQRQYL----PNSHPPTVVRRPNLHPS
                                                                                                                                                                 PPLPRT----PTPSHPHSRAPPLPRAPTPTHPHSHAPPLPRTPETHPT
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                                                                                                                                                                                                                                                                22.8%;
                                                                                                                                                                                                                                            Score 69.5; DE Pred. No. 1.9; 7; Mismatches
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                         21-Jul-1995
                                                                                                                                                                                                                                                                                                                                                                                                              protein
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                       #text_change
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                           21-Jul-2000
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A; Molecule type: DNA
A; Residues: 1-289 < KUR>
A; Cross-references: GB: BA000019; PIDN: BAB73787.1;
A; Experimental source: strain PCC 7120
C; Genetics:
A; Gene: all2000
                                                    A;Cross-references: EMBL:X54422; NID:g9695; PID:g9696
R;Taylor, S.W.; Waite, J.H.; Ross, M.M.; Shabanowitz,
J. Am. Chem. Soc. 116, 10803-10804, 1994
A;Title: trans-2,3-cis-3,4-dihydroxyproline, a new nat
A;Reference number: A59158
A;Accession: A59158
A;Molecule type: protein
                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Mytilus edulis (blue mussel)
C;Date: 27-May-1994 #sequence revision 10-Nov-1995 #text_change 02-Jun-200
C;Accession: S23760; A59158; Ā20840
R;Filpula, D.R.; Lee, S.M.; Link, R.P.; Strausberg, S.L.; Strausberg, R.L.
Biotechnol. Prog. 6, 171-177, 1990
A;Title: Structural and functional repetition in a marine mussel adhesive: A;Reference number: S23760; MUID:91025829; PMID:1367451
A;Accession: S23760
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-875 <FILE
A;Resid
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A,Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium Ana
A:Reference number: AB1807; MUID:21595285; PMID:11759840
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G;Species: Nostoc sp. PCC 7120

A;Note: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC

G;Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Dec-2002

C;Accession: AB2067

R;Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, N.
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A;Residues: 1-381 <DEU>
A;Cross references: EMBL:L37017; NID:g3818415; PIDN:AAD03487.1;
C;Superfamily: hydroxyproline-rich glycoprotein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Deutch, C.E.; |
Plant Mol. Biol.
     Reference number: A59158; Accession: A59158; Accession: A59158; Molecule type: protein; Residues: 173-182 < TAY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   olyphenolic adhesive protein 1 [validated] Alternate names: MeFP-1
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17; Conserv
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Pred. No. 5.2;
6; Mismatches
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                                                                                                                                             RESULT 15
T25073
hypothetical protein T21C9.9 - C;Species: Caenorhabditis elega C;Date: 15-Oct-1999 #sequence:
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A;Mclecule type: DNA
A;Molecule type: DNA
A;Residues: 1-1400 <SCH>
A;Cesidues: 1-1400 <SCH>
A;Cesidues: EMBL:AL442043; GSPDB:GN00116; NCSP:B11E6.80
A;Cross-references: EMBL:AL442043; GSPDB:GN00116; NCSP:B11E6.80
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submitted to the Protein S
A/Reference number: Z26053
A/Accession: T52359
                                                                                                                                                                                                                                                                                                                                                             hypothetical protein B11E6.80 [imported] - Neurospora crassa C;Species: Neurospora crassa C;Date: 20-Oct-2000 #sequence_revision 20-Oct-2000 #text_change C;Accession: T52359 R;Schulte, U.; Aign, V.; Hoheisel, J.; Brandt, P.; Fartmann, B.;
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J. Biol. Chem. 258, 2911-2915, 1983
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A;Title: Evidence for a repeating 3,4-dihydroxyphenylalanine-A;Reference number: A20840; MUID:83135732; PMID:6298211
A;Accession: A20840
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                                                          1138 QRRPQQQGSGPGLPPHLQPNPLLQPPRPQAQIQPRPQPQPQLRPQPQLQRQPPTRLQPRP
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#sequence_revision

15-Oct-1999 #text_change 15-Oct-1999

Caenorhabditis elegans

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C;Accession: T25073
R;McMurray, A.
submitted to the EMBL Data Library, May 1996
A;Reference number: Z19977
A;Accession: T25073
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
A;Residues: 1-254 <WILL-
A;Residues: 1-255 <WILL-
A;Residues: 1-254 <WILL-
Best Local Similarity 28.6%; Pred. No. 5.1; Indels 15; Gaps 3;

Query Match
Best Local Similarity 28.6%; Pred. No. 5.1; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

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Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 21; Indels 15; Gaps 3;

Query Matches 18; Conservative 9; Mismatches 2
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Result
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Maximum Match 100%
Listing first 45 summaries
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      GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
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Q29135 tapirus ind
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7 tragulus ja
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2 nemorhaedus
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8 bos taurus
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9 camelus dro
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	Q25460 mytilus edu	O42783 neurospora	P17588 herpes simp	Q25434 mytilus cor	P19442 cavia porce	Q95191 mazama amer	Q95146 capreolus c	Q95149 cervus elap	Q95199 muntiacus r		Q95239 rangifer ta

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k S.A., McGuelland W.H., Fetels G.O., Malek J.A., Gun k S.A., McEwan P.U., McKernan K.U., Malek J.A., Gun ards S., Worley K.C., Hale S., Garcia A.M., Gay L.J alon D.K., Muzny D.M., Sodergren E.U., Lu X., Gibbs y J., Helton E., Ketteman M., Madan A., Rodrigues S ing M., Madan A., Young A.C., Shevchenko Y., Bouffa eing R.W., Touchman J.W., Green E.D., Dickson M.C., iguez A.C., Grimwood J., Schmutz J., Myers R.M., erfield Y.S.N., Krzywinski M.I., Skalska U., Smailu erch A., Schein J.E., Jones S.J.M., Marra M.A., erch A., Schein J.E., Jones S.J.M., Marra M.A., erch and initial analysis of more than 15,000 fu n and mouse cDNA sequences.";	63730; idvik B., Hansson L.; pa-casein gene."; pa-casein gene."; A., Grouse L.H., Derge J.G., A., Grouse L.H., Derge J.G., Buetow K.H., Schaefer C.F., Bhat N.K., Ore T., Max S.I., Wang J., Hsleh F., Farmer A.A., Rubin G.M., Hong L., Bonaldo M.F., Casavant T.L., Scheetz T. Toshiyuki S. Carninci P., Prange C. Peters G.T. Abbarson P. Prange C.	SEQUENCE FROM N.A. Menon R.S., Jeffers K.F., Chang Y.F., Ham R.G.; Submitted (XXX-1991) to the EMBL/GenBank/DDBJ databases. [2] SEQUENCE FROM N.A. TISSUE=Mammary gland; MEDLINE=93208373; PubMed=1296818; Bergstroem S., Hansson L., Hernell O., Loennerdal B., Nilsson A.K., Stroemqvist M.; "Cloning and sequencing of human kappa-casein cDNA."; DNA Seq. 3:245-246(1992).	LT 1 -HUMAN -CASK HVN -CASK HVN -CASK 10-APR -1 01-OCT -2 110-OCT -2 110-OCT -2 Kappa ca CSN3 OR Homo sag Eukaryot Mammalia NCBN Tax

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SEQUENCE OF 25-182.
MEDLINE-85258132; PubMed-4018271;
Brignon G., Chtourou A., Ribadeau-Dumas
"Dreparation and amino acid sequence of
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-!- FUNCTION: Kappa casein stabilizes micelle
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Plowman J.E., Creamer L.K., Liddell M.J., Cross J.J.;
Plowman J.E., Creamer L.K., Liddelcorresponding to human kappa-casein
"Structural features of a peptide corresponding to human kappa-casein
residues 84-101 by 1H-nuclear magnetic resonance spectroscopy.";
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CARBOHYD
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CARBOHYD
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EMBL; X66417; CAA47048.1; --
EMBL; U51899; AAC50772.1; --
EMBL; BC010935; AAH10935.1;
PIR; JC4957; KXHU.
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MEDLINE=99207197; PubMed=10
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[6]
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CARBOHYD
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GO: GO:0007582; P:physiological proce
InterPro; IPR000117; Casein_kappa.
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SUBUNIT: Heteromultimers composed of alpha-si casein casein linked by disulfide bonds.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Mammary gland specific. Secreted
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SIMILARITY: Belongs to the kappa-casein family
DATABASE: NAME=Protein Spotlight;
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      Glycoprotein;
KAPPA CASEIN.

CLEAVAGE (BY CHYMOSIN (=R
O-LINKED (GALNAC. .).
O-L
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AGE (BY CHYMOSIN (=RENNIN)).
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human kappa-casein.";
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Eukaryota; Metazoa; Chordata; Cranie
Mammalia; Eutheria; Perissodactyla;
NCBI_TaxID=9792;
                                                                             BALPH
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Pfam; PF00997; casein_kappa;
ProDom; PD003689; Casein_kap)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Evidence from milk casein genes that of hippopotamid artiodactvls."
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CSN3 OR CSN10 OR CSNK.
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Milk; Phosphorylation; Glycoprotein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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1. Biol. Evol. 13:954-963(1996).
- FUNCTION: Kappa casein stabilizes
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NOV-1997 (Rel. 35, Las
COCT-2003 (Rel. 42, Las
Spa casein (Fragment).
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RESULT
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Best Local S
Matches 34
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28-FEB-2003 (Rel
10-OCT-2003 (Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outst the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for comentities requires a license agreement (See http://www.isb-sib.ch/anor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=96364219; PubMed=8752004; Gatesy J., Hayashi C., Cronin M.A., Ar "Evidence from milk casein genes that of hippopotamid artiodactyls.";
                                                                                                                                                                                                                                                                                                                                                              HORSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00997; casein_kappa; 1.
ProDom; PD003689; Casein_kappa; 1.
Milk; Phosphorylation; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Balaenoptera physalus (Finback whale) (Common rorqual).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eute
Mammalia; Eutheria; Cetartiodactyla; Cetacea; Mysticeti;
                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=22504255; PubMed=12617390;
Lenasi T., Rogelj I., Dovc P.;
"Characterization of equine cDNA so
                                                                                                                                                                                                                   Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                        28-FEB-2003 (Rel. 41, Created)
10-OCT-2003 (Rel. 42, Last sequence up
15-MAR-2004 (Rel. 43, Last annotation
Kappa casein precursor (Kappa-CN).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U53888; AAB08404.1; -.
InterPro; IPR000117; Casein_kappa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of hippopotamid artiodactyls.";
Mol. Biol. Evol. 13:954-963(1996).
-!- FUNCTION: Kappa casein stabilizes micelle formation,
                                        Submitted (NOV-1999)
                                                                                 SEQUENCE OF 21-181
                                                                                                                      kappa-casein."
                                                                                                                                                                                                      NCBI_TaxID=9796;
                                                                                                                                                                                                                                                 Equus caballus (Horse)
                                                                                                                                                                                                                                                               CSN3 OR CSN10
                                                                                                                                                                                                                                                                                                                                              CASK_HORSE
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                                                       [edeschi
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                                                                                                            Dairy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: Belongs to the kappa-casein family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         casein precipitation in milk.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Mammary gland specific.
FUNCTION: Kappa casein stabilizes casein precipitation in milk. SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                   27
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                                                                                                            Res.
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                                                                                                            70:29-36 (2003)
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Perissodactyla;
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82
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                                        to Swiss-Prot.
                                                                                                                                   P.;
cDNA sequences
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Pred. No. 2.1e-14;
4; Mismatches 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLEAVAGE (BY CHYMOSIN (=RENNIN))
(BY SIMILARITY).
; 17024F195EA78781 CRC64;
                                                                                                                                                                                                                  Craniata; Verte
ctyla; Equidae;
                                                                                                                                                                                                                                                                                                                                                PRT;
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                           micelle
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                                                                                                                                                                                                                                 Vertebrata;
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orata; Euteleostomi;
                          formation,
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RESULT 5
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Best Local S
Matches 35
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CONFLICT
CONFLICT
EMBL; U53892; Annu Case....
InterPro; IPR000117; Case....
Pfam; PF00997; Casein kappa; 1.
Pfam; PD003689; Casein kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ProDom;
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                                                                                                                                                                                                                                                                                                           Gatesy J., Hayashi C., Cronin M.A., A. "Evidence from milk casein genes that of hippopotamid arriodactyls.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation updat
                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                 Tapirus indicus (Asiatic tapir) (Malayan tapir).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Perissodactyla; Tapiridae; Tapir
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kappa casein (Fragment).
CSN3 OR CSN10 OR CSNK.
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                                                                                                                                                                                                                         -
                                                                                                                                                                                                                                      -!- FUNCTION: Kappa casein stabilizes casein precipitation in milk.
-!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: Mammary gland
                                                                                                                                                                                                                                                                                                                                                         MEDLINE=96364219;
                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9802;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        029135;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CASK TAPIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- TISSUE SPECIFICITY: Mammary gland specific. Sec-!- SIMILARITY: Belongs to the kappa-casein family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  nterPro; IPR000117; Casein
                                                                                                                                                                                                                      TISSUE SPECIFICITY: Mammary gland specific. Secreted SIMILARITY: Belongs to the kappa-casein family.
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35; Conser
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                                                                                                                                                                                                                                                                                                Evol. 13:954-963 (1996).
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152
185
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112
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118
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_kappa; 1.
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CLEAVAGE (BY CHYMOSIN (=REN
(BY SIMILARITY).

TCHKND -> RCVKNH (IN REF. 2).

C -> R (IN REF. 2).

V -> V (IN REF. 2).

W; F7634F52CEE90606 CRC64;
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Pred. No. 6.1e-14;
; Mismatches 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                            Arctander P
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RESULT
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DT 01
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DT Ka
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Best Local S
Matches 32
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Best Local
            01-NOV-1997
01-NOV-1997
10-OCT-2003
                                                 CASK_HIPAM
Q28441;
                                                                                                                                                                                                                                       Milk;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CASK_UNCUN
Q29150;
01-NOV-1997
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=96364219; PubMed=8752004; Gatesy J., Hayashi C., Cronin M.A., Arctander P.; "Evidence from milk casein genes that cetaceans are close relatives of hippopotamid arriodactyls."; Mol. Biol. Evol. 13:954-963(1996).

-I- FUNCTION: Kappa casein stabilizes micelle formation, preventing casein precipitation in milk.

-I- SUBCELULAR LOCATION: Secreted.
-I- TISSUE SPECIFICITY: Mammary gland specific. Secreted in milk.
                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia, Eutheria; Carnivora; Fissipedia; Felidae; Uncia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kappa casein (Fragment).
CSN3 OR CSN10 OR CSNK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
 Kappa
                                                                                                                                                                                                                                                                                InterPro; IPR000117; Casein_kappa.
Pfam; PF00997; casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=29064;
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10-OCT-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Uncia uncia
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 casein
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                                                                                                                                                                                                                                                         Phosphorylation; Glycoprotein.
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                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                      PD003689; Casein
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                                                                                                                              YPHKPAVPVNINQYMPYPYYAKPVAVRPHVQIPQWQVLPNTYTPTVVRHPHLPASF 81
                                                                                                                                                YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
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                                                                                                                                                                                                                                  146 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Snow leopard) (Panthera uncia)
          (Rel. 35, Created)
(Rel. 35, Last sequence update)
(Rel. 42, Last annotation update)
                                                                                                                                                                                 Conservative
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(Fragment).
                                                                STANDARD;
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58.2%;
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Pred. No. 7.9e-14;
7; Mismatches 16
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Pred. No. 7.9e-14;
3; Mismatches 18
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CARBOHYD
SEQUENCE
                                                                                                                                                                          MEDLINE=96364219; PubMed=8752004; Gatesy J., Hayashi C., Cronin M.A., Arctander "Evidence from milk casein genes that cetacear of hippopotamid artiodactyls."; Mol. Biol. Evol. 13:954-963(1996).
                                                                                                                                                                                                                                                                                                                                     Kappa casein (Fragment).
CSN3 OR CSNIO OR CSNIX.
CSN3 OR GNIO OR CSNIX.
Lama guanicoe (Guanaco).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Tylopoda; Camelidae; Lama.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN the European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content modified and this statement is not removed. Usage by ancentities requires a license agreement (See http://www.isb-sentities requires a license agreement (See
                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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10-OCT-2003
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ProDom; PD003689; Casein_kappa; 1.
Milk; Phosphorylation; Glycoprotein.
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Hippopotamus amphibius (Hippopotamus).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Hippopotamidae; Hippopotamus.
                                                                                                                                                         -!- FUNCTION: Kappa casein stabilizes
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ween the European
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SUBCELLULAR LOCATION: Secreted.
TIASUE SPECIFICITY: Mammary gland specific. Sec
SIMILARITY: Belongs to the kappa-casein family.
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SUBCELLULAR LOCATION: Secreted.
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                                                                                                                                                                                                                                                                                                                              between the Swiss Alberton. There are no resulting in no way the European Bioinformatics Institute. There are no resulting in no way use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. Usage by and for commercial modified and this statement is not removed. However, www.isb-sib.ch/announce/
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Tylopoda; Camelidae; Camelus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         J. Dairy Res. 65:209-222(1998).
-!- FUNCTION: Kappa casein stabilizes micelle formation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=98291310; PubMed=9627840;
Kappeler S., Farah Z., Puhan Z.;
"Sequence analysis of Camelus dromedarius milk caseins.";
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InterPro; IPRO00117; Casein kappa.
Pfam; PF00997; casein kappa; 1.
ProDom; PD003689; Casein kappa; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        casein precipitation in milk.
-:- SUBCELLULAR LOCATION: Secreted.
-:- TISSUS SPECIFICITY: Mammary gland specific. Secreted
-:- SIMILARITY: Belongs to the kappa-casein family.
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Milk; Phosphorylation; Glycoprotein;
                                                                                                SEQUENCE
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               Score 165; DB 1;
Pred. No. 6.6e-12;
4; Mismatches 19;
                                                                                                                KAPPA CASEIN.
CLEAVAGE (BY CHYMOSIN (=RENNIN))
SIMILARITY).
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                                                                                                418D19E061DA7338 CRC64;
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No. 4.3e-12;
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CASK_PIG
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CASK_TAYTA
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Best Local S
Matches 30
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Kappa casein (Fragment).
CSN3 OR CSN10 OR CSNK.
Tayassu tajacu (Collared peccary) (Pecari tajacu).
Tayassu tajacu (Collared peccary) (Pecari tajacu).
Tayassu tajacu (Collared peccary) (Pecari tajacu).
Tayassuidae; Pecari.
                                                                                                           CASK PIG
P11841;
01-OCT-1989
01-FEB-1995
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gatesy J., Hayashi C., Cronin M.A., Arctander "Evidence from milk casein genes that cetacean of hippopotamid artiodactyls.", Mol. Biol. Evol. 13:954-963(1996).

-i- FUNCTION: Kappa casein stabilizes micelle casein precipitation in milk.

-i- SUBCELIGIAR LOCATION: Secreted.
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Q28794;
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01-NOV-1997 (Rel. 35, Last
10-OCT-2003 (Rel. 42, Last
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InterPro; IPR0001117; Casein kappa.
Pfam; PF00997; casein kappa; 1.
ProDom; PD003689; Casein kappa; 1.
Milk; Phosphorylation; Glycoprotein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  use by non-profit institutions as long modified and this statement is not remove entities requires a license agreement (86 or send an email to license@isb-sib.ch).
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                   Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -!- TISSUE SPECIFICITY: Mammary gland specific. Secreted -!- SIMILARITY: Belongs to the kappa-casein family.
                                                                          Kappa casein precursor. CSN3 OR CSN10 OR CSNK.
NCBI_TaxID=9823;
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                     Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
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Pred. No. 1.9e-11;
5; Mismatches 20;
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133188256EC2C038
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SEQUENCE FROM N.A.

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Matches 30
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                                                  SEQUENCE FROM N.A.

MEDLINE-96139018; PubMed=8587130;

Chikuni K., Mori Y., Tabata T., Saito M., Monma M.,

"Molecular phylogeny based on the kappa-casein and

"Molecular the mammalian suborder Ruminantia.";

J. Mol. Bvol. 41:859-866(1995).
  Addeo F., "Primary
                                                                                                                                               Kappa casein precursor.

CSN3 OR CSN10 OR CSNC CSNC Bubalus bubalis (Domestic water buffalo).

Bubalus bubalis (Domestic water buffalo).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea

Bovidae; Bovinae; Bubalus.

NCBI_TaxID=89462;
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           MEDLINE=77222193; PubMed=328059;
Addeo F., Mercier J.-C.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ProDom; Fuccion Milk; Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    kappa caseins.";
FEBS Lett. 72:173-178(1976).
-!- FUNCTION: Kappa casein stabilizes
                                      SEQUENCE OF 116-190
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Pfam; PF00997; casein kappa; 1.
ProDom; PD003889; Casein kappa; 1.
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Chobert J.M., Mercier J.-C., Bahy C.,
"Primary structure of the casein macro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Levine W.B., "Cloning and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE=Mammary gland;
MEDLINE=92367959; PubMed=1503275;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S SWISS-PAOT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the European Bioinformatics Institute. There are no rest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               casein precipitation in milk. SUBCELLULAR LOCATION: Secreted
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                                                                                                                                                                                                                                                                                                                                             YQHRSAVSPNRQFIPYPYYARPVVAGPHAQKPQWQDQPNVYPPTVARRPRPHASF 117
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117
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118
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21 BY SIMILARITY.
188 KAPPA CASEIN.
118 CLEAVAGE (BY CHYMOSIN
(BY SIMILARITY).
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  casein
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5; Mismatches
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he porcine kappa-casein cDNA.";
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kappa
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Best Local S
Matches 29
MEDLINE=97055443; PubMed=8899730;
Cronin M.A., Stuart R., Pierson B.J., Patton
"K-casein gene phylogeny of higher ruminants
Mol. Phylogenet, Evol. 6:295-311(1996).
                                                                                                                     MEDLINE=96139018; PubMed=8587130;
Chikuni K., Mori Y., Tabata T., Saito M., Monma
"Molecular phylogeny based on the kappa-casein
sequences in the mammalian suborder Ruminantia.
J. Mol. Evol. 41:859-866(1995).
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MOD_RES
VARIANT
VARIANT
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Milk; Phosphorylation; Glycoptein; Signal.
SIGNAL 2 BY SIMILARITY.
CHAIN 22 190 KAPPA CASEIN.
SITE 126 127 CLEAVAGE (BY CHAINS)
                                                                                                                                                                                                                                                                                NCBI_TaxID=34873;
                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata
Mammalia; Eutheria; Cetartic
Bovidae; Caprinae; Oreamnos.
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CSN3 OR CSN10 OR CSNK.
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10-OCT-2003
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EMBL; D14368; BAA03285.1;
EMBL; D14369; BAA03285.1;
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Biochimie 59:375-379(1977).
                                                                                      SEQUENCE OF 69-192 FROM N.A.
                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                    Oreamnos americanus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00997; casein_kap
ProDom; PD003689; Casein_
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Pfam; PF00997; casein kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: Kappa casein stabilizes micelle for casein precipitation in milk. SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Mammary gland specific.
SIMILARITY: Belongs to the kappa-casein fam.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OREAM
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170
156
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190
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(Rel. 34, Last sequence update)
(Rel. 42, Last annotation updat
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Chordata; Craniata; Vertebra:
Cetartiodactyla; Ruminantia;
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T -> I.
E -> D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 135;
Pred. No. 1
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CLEAVAGE (BY CHYMOSIN
(BY SIMILARITY).
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minantia; Pecora; Bovoidea;
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                                                                                                                                                                                            Monma M.,
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                        (Pecora,
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L outstation -
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P SEQUENCE FROM N.A.

MEDLINE=96139018, PubMed=8587130;

A Chikuni K., Mori Y., Tabata T., Saito M., Monma M., Kosugiyan Chikuni K., Mori Y., Tabata T., Saito M., Monma M., Kosugiyan M., Wolecular phylogeny based on the kappa-casein and cytochrom sequences in the mammalian suborder Ruminantia.";

J. Wol. Evol. 41.859-866(1995).

C -!- FUNCTION: Kappa casein stabilizes micelle formation, pre casein precipitation in milk.

C casein precipitation in milk.

C -!- SUBCELLULAR ICCATION: Secreted.

-!- SIMILARITY: Belongs to the Kappa-casein family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 29
                                                                                                                                                                                                                                        P42156;
01-NOV-1995
01-NOV-1995
10-OCT-2003
                                                                                                                                                               Kappa casein precursor.
Kappa casein precursor.
CSN3 OR CSN10 OR CSNK.
Capricornis crispus (Japanese serow).
Capricornis drispus (Chordata; Craniata;
Eukaryota; Metazoa; Chordata; Craniata;
Rufferia; Cetarriodactyla; Ruf
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CARBOHYD
MOD_RES
MOD_RES
SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This SWISS-PROT entry is copyright. It is produced through a collab between the Swiss Institute of Bioinformatics and the EMBL outset the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in modified and this statement is not removed. Usage by and for con
                                                                                                                                                 Mammalia; Eutheria;
Bovidae; Caprinae; (
NCBI_TaxID=9966;
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SIGNAL
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Probom; PD003689; Casein kappa; 1.
Milk; Phosphorylation; Glycoprotein;
Pyrrolidone carboxylic acid.
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an email to license@isb-sib.ch).
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192
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CLEAVAGE (BY CHY
(BY SIMILARITY).
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                                                                                                                                                                                                                                                                                          PRT;
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AGE (BY CHYMOSIN (=RENNIN))
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                                                                                                                                                                                         Vertebrata; Euteleostomi;
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RESULT 15
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RREPRESENTATION OF THE REPRESENTATION OF THE
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Best Local S
Matches 28
                                                                                                                                                                                            STRAIN-Ssp. aegagrus; TISSUE-Mammary gland; MEDLINE-94042560; PubMed-8226388; Coll A., Folch J.M., Sanchez A.; "Nucleotide sequence of the goat kappa-casein cDNA."; Anim. Sci. 71:2833-2833(1993).
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MOD_RES
MOD_RES
VARIANT
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01-AUG-1992 (Rel. 23, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Kappa casein precursor (Kappa-CN).
CSN3 OR CSN10 OR CSNK.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                       Chikuni K., Mori Y., Tabata T., Saito M., Monma "Molecular phylogeny based on the kappa-casein sequences in the mammalian suborder Ruminantia. J. Mol. Evol. 41:859-866 (1995).
                                                                                                           SEQUENCE FROM N.A.
MEDLINE=96139018; Pub
Chikuni K., Mori Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00997; casein kappa; 1.
ProDom; PD003689; Casein Kappa; 1.
Milk; Phosphorylation; Glycoprotein;
Pyrrolidone carboxylic acid.
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Mammalia; Eutheria;
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28; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                   PubMed=8587130;
                                                                                                                                                                                                                                                                                                                                                                                          Capra.
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192
127
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 129; DB 1; 1
Pred. No. 8.4e-08;
5; Mismatches 21;
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CLEAVAGE (BY CHYMOSIN (=RENNIN))
(BY SIMILARITY).
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O-LINKED (GALNAC.
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                                                                                                             Saito M., Monma M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8SPW6; Q8SPW7;
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SIMILARITY).
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SEQUENCE OF 22-192

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EMBL;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 31-189 FROM N.A., AND VARIANT ILE-140. Feligini M., Cubric-Curik V., Parma P., Curik I., Greppi G "Polymorphism of kappa-casein in Italian goat breeds: a ned designed DNA test for discrimination of A and B alleles."; Food Technol. Biotechnol. 40:293-298 (2002).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anim.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Unpublished results, cited Mercier J.-C., Chobert J.-M FEBS Lett. 72:208-214(1976)
                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          caprine kappa casein Submitted (MAR-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Angiolillo A., Yal "Characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Yahyaoui M.H., Coll A., Sanchez A., Folch J.M.; "Genetic polymorphism of the caprine kappa casein J. Dairy Res. 68:209-216(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 31-192 FROM N.A., AND VARIANTS ARG-65; ILE-86; ILE-140 AND PRO-180.
                                                                                                                                                                                           EMBL;
                                                                                                                                                                                                                                            EMBL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochimie 58:1303-1310(1976)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=77112689; PubMed=1016651;
Mercier J.-C., Addeo F., Pelissier J.-P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 127-192
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
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MEDLINE=21395138; PubMed=11504385;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=21422902; PubMed=11531704;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Yahyaoui M.H., Sanchez A., Folch J.M.; "Characterization of new genetic variants and genotyping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRO-180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Primary structure of the casein
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                    L; AY027868; AAK17010.1; -.
L; AF485339; AAL90871.1; -.
L; AF48534; AAL90873.1; -.
L; AF485341; AAL90873.1; -.
L; AY090465; AAM12025.1; -.
L; AY090466; AAM12025.1; -.
L; AY090467; AAM12027.1; -.
L; AY090467; AXM12027.1; -.
L; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            casein precipitation in milk.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Mammary gland specific.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: Kappa casein stabilizes micelle
AY090465;
AY090466;
AY090467;
AF434988;
S15513; S15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: Belongs to the kappa-casein family.
                                                                                                                                                                                                                                         D14371; BAA03286.1; JOINED D14372; BAA03286.1; JOINED X60763; CAA43174.1; -
                                                                                                                                                                                                                                                                                                              D14373; BAA03286.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genet. 32:226-230(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OF 31-192 FROM N.A., AND VARIANTS GLY-111 AND ILE-140.
lo A., Yahyaoui M.H., Sanchez A., Pilla F., Folch J.M.,
erization of a new genetic variant in the caprine k-casein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OF 31-192 FROM N.A.,
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to the EMBL/GenBank/DDBJ databases
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND VARIANTS ARG-65; ILE-86; ILE-140 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND VARIANTS ILE-86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          macropeptide of caprine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Jaeger S.,
n (CSN3) in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     formation,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Secreted in milk.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ILE-140; VAL-177
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SIGNAL
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ProDom; PD003689; Casein kappa; 1.
Milk, Phosphorylation; Glycoprotein; Signal; Polymorphism;
Pyrrolidone carboxylic acid.
                                                                                                              CONFLICT
                                                                                                                                                                                                                                                                                                  InterPro;
124 LSF
                53
                                  64
                                                  Н
                                                                    28;
                                                                             Similarity
                PSF
                                 YQQRPVALINNQFLPYPYYAKPVAVRSPAQTLQWQVLPNTVPAKSCQDQPTTLARHPHPH
                                                  YORRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNS------HPPTVVRRPNLH
                                                                                                                                                                                                                                                                                                  IPR000117; Casein kappa.
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192 AA;
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180
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                                                                                                      U.S. I (in allele E).

V.> I (in allele E).

V.> I (in allele E, allele F and allele C, allele E, allele F and allele C, allele F and allele C).

A.> V (in allele C).

A.> V (in allele C).

S.> P (in allele CSN^0
allele F and allele CSN^0

allele F and allele CSN^0
                                                                                                                                                                                                           KAPPA CASEIN.
CLEAVAGE (BY CHYMOSIN (=
PYRROLIDONE CARBOXYLIC A
PHOSPHORYLATION.
PHOSPHORYLATION.
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                                                                                     Score 129;
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Search completed: September 1, 2004, 00:10:43 Job time : 19.8667 secs

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Match
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305
1 YQRRPAIAINNPYVPRTYYA.....YLPNSHPPTVVRRPNLHPSF 55
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     Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                SUMMARIES
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         P79991 ailurus ful
Q865e0 ursus ameri
Q865d9 ursus arcto
Q865d8 ursus arcto
Q865d8 ursus arcto
Q865d8 ursus arcto
Q865d3 ursus arcto
Q865d3 ursus marit
Q865d3 ursus marit
Q865d1 ursus marit
Q865d1 ursus marit
Q865d1 ursus marit
Q861u3 ursus ameri
Q861u3 ursus ameri
Q861u4 ursus arcto
Q861u4 ursus arcto
Q861u8 ursus arcto
                                                                                                                                                                                                                          Description
 9 ursus arcto
8 ursus arcto
6 ursus ameri
5 ursus arcto
3 ursus marit
1 ursus marit
1 ursus marit
1 ursus marit
4 ursus ameri
3 ursus ameri
9 ursus ameri
7 ursus ameri
7 ursus marit
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P79091
P79091
PRELIMINARY; PRT; 146 AA.

AC P79091; PRELIMINARY; PRT; 146 AA.

AC P79091;
DT 01-MAY-1997 (TYEMBLYEL 03, Created)
DT 01-MAY-1997 (TYEMBLYEL 03, Last sequence update)
DT 01-JUN-2003 (TYEMBLYEL 24, Last annotation update)
Exappa casein (Fragment).
OS Ailurus fulgens (Lesser panda).
OC Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC Mammaila; Eutheria; Carnivora; Fissipedia; Procyonidae; Ailurus.
OX NCBI_TaxID=9649;
RN [1]
RESULT 2
Q865E0
ID Q865
AC Q865
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                                                                                                                              Query Match
Best Local S
Matches 38
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GO; GO:0005576; C:extracellular; IEA
InterPro; IPR001117; Casein kappa.
Pfam; PF00997; casein kappa; 1.
ProDom; PD003689; Casein kappa; 1.
NON TER
SEQUENCE 146 AA; 16478 MW; 06987
Q865E0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.

Gatesy J.;

"More DNA support for a Cetacea/Hippopotamidae clotting protein gene g-fibrinogen.";

Mol. Biol. Evol. 0:0-0(1997).
                                                                                27
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                                                                                                                              ch 71.5%;
l Similarity 69.1%;
38; Conservative
                                                                                               YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
                                                                           YSHRPAVPINHQYVPYPYYAKPVAIRPHAQIPQWQVLPNAYPPTVVRRPHLHPSF
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                                                                                                                                                                                 16478 MW; 069878C81C0CAB45 CRC64;
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07YRW5
07YRW3
09N1F1
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09N1F3
09SN1F3
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09SNX7
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Q28354
P79230
P79230
Q95MY5
Q8WN75
Q7YRV1
                                                                                                                              Score 218; DB 6; L
Pred. No. 3.3e-19;
5; Mismatches 11;
               PRT;
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0.7yrv1
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0.7yrv3
0.7yrx3
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2 capra hircu
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beatragus h
oryx gazell
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raphicerus
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delphinidae
physeter ca
connochaete
capra hircu
capra hircu
capra hircu
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bos mutus g
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capra hircu
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RESULT 3
Q8659
ID CD865
AC Q865
DT 01-C
DT 01-
RESULT 4
Q865D8
ID Q865
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Best Local S
Matches 37
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Best Local S
Matches 37
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01-JUN-2003
01-OCT-2003
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NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-GK20_9;
Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes ir
American bears.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      O1-JUN-2003 (TrEMBLrel. 24, Created)
O1-JUN-2003 (TrEMBLrel. 24, Last sequence v
O1-OCT-2003 (TrEMBLrel. 25, Last annotation
Kappa casein (Fragment).
Ursus arctos (Brown bear) (Grizzly bear).
Bukaryota, Metazoa; Chordata; Craniata; Vermanmalia; Eutheria; Carnivora; Fissipedia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NON_TER
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Submitted (OCT-2001) to the EMBL/GenB
EMBL; AF439903; A2063786.1; -.
GO; GO:0005576; C:extracellular; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=AB590_6;
STRAIN=AB590_6;
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Ursus americanus (American black bear).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF439906; AAO63789.1;
GO; GO:0005576; C:extracellular; IEA.
InterPro; IPR000117; Casein kappa.
Pfam; PF00997; casein kappa; 1.
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      Q865D8
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01-JUN-2003
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                                                                                                                                                                                                                  YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
                                                                                                                                                               YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
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145 AA;
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Pred. No. 7.5e
6; Mismatches
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Pred. No. 7
      PRT;
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ia; Ursidae; Ursus.
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7.5e-18;
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Best Local 9
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01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Kappa casein (Fragment).
Ursus americanus (American black bear).
                                                                                                                                                                                                                                                                                                                                                                                            Q865D6;
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STRALM=GN4 7;
Cronin M.A., Nelson R.J., Amstrup S.C.,
Tyariation in the MHC class II DQB and
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Ursus arctos (Brown bear) (Grizzly bear).
Bukaryota, Metazoa, Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
                                                                                                                                 EMBL; AF439914; AAO63795.1; -.
EMBL; AF439914; AAO63795.1; -.
GO; GO:0005576; C:extracellular; IEA.
InterPro; IPR000117; Casein_kappa.
Pfam; PF00997; casein_kappa; 1.
ProDom; PD003689; Casein_kappa; 1.
                                                                                                                                                                                                                           SEQUENCE FROM N.A.
STRAIN=MTB2_4;
STRAIN=MTB2_4;
Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes
                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9644;
                                                                                                                                                                                                     Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         American bears.";
                                                                                                                                                                                                                                                                                        NCBI_TaxID=9643;
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 27
                                                l Similarity
37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>د ب</u>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PD003689; Casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YPHRPAVPINHQYVPYYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF
YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
                      YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                                                                                                                                                                                                                 bears.";
                                                                                                                                                                                                    (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                  145
145 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           145 AA;
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(TrEMBLrel. 24, Last seq
(TrEMBLrel. 25, Last ann
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                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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16253 MW;
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67.3%;
                                                                                                   16218 MW;
                                                             67.9%;
                                                 Score 207; DB Pred. No. 7.5e 6; Mismatches
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Pred. No. 7.5e-18
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                                                                                                    35381DF7CB3CB30F
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                                                             DB 6;
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                                                                         Length
                                                                                                      CRC64;
                                                    Indels
                                                                                                                                                                                                                                                                                                          Euteleostomi;
Ursus.
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Best Local
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Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes in North
American bears.";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                American bears.";

Submitted (CCT-2001) to the EMBL/GenBank/DDBJ databases.

EMBL; AF439924; AAO63799.1;

GO; GO:0005576; C:extracellular; IEA.

Interpro; IPR000117; Casein_kappa.

Pfam; PF00997; casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-SAKE 1;
Cronin M.A., Nelson R.J., Amstrup S.C.,
"Variation in the MHC class II DQB and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON TER
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01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q865D5
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01-JUN-2003 (TrEMBLrel. 24,
01-JUN-2003 (TrEMBLrel. 24,
01-OCT-2003 (TrEMBLrel. 25,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
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Ursus arctos (Brown bear) (Grizzly bear)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kappa casein (Fragment).
Ursus arctos (Brown bear) (Grizzly bear).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Eutele
Mammalia, Eutheria, Carnivora, Fissipedia, Ursidae, Ursus.
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GO; GO:0005576; C:extracellular; IEA.
InterPro; IPR000117; Casein_kappa.
Pfam; PF00997; casein_kappa; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9644;
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                                                                                                                                                                                                                                                                       SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                            ProDom; PD003689; Casein_kappa; 1.
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nes 37; Conserv
                                                                                                                                                                                                                                                                                                                                     TER
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                                                                                  1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55
                                                                                                                                                Similarity 67.3
37; Conservative
                          YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF 81
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145 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 16291 MW;
                                                                                                                                                                                                                                                                       16277 MW;
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                                                                                                                                          67.9%; Score 207; DB 6; 1 67.3%; Pred. No. 7.5e-18; tive 6; Mismatches 12;
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Pred. No. 7.5e-18;
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                                                                                                                                                                                                                                                                   B806C09AAB3CB30D CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           K-casein genes in North
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wickliffe J.,
                                                                                                                                                                                                        DB 6; Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
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                                                                                                                                                Indels
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AC Q8
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Matches 37
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SEQUENCE
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Q865D3; (TrEMBLrel. 24, Created)
O1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
O1-JUN-2003 (TrEMBLrel. 25, Last annotation update)
C1-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Kappa casein (Fragment).
Ursus arctos (Brown beat) (Grizzly bear).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Eukaryota; Metazoa; Carnivora; Fissipedia; Ursus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=1796_1;
Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.,
"Variation in the MHC class II DQB and K-casein genes in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus. NCBI_TaxID=29073;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
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STRAIN=SAKS_1;
Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   American bears."; submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kappa casein (Fragment).
Ursus maritimus (Polar bear) (Thalarctos maritimus).
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Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                            EMBL; AF439927; AAO63802.1; -...GO; GO:0005576; C:excracellular; IEA InterPro; IPR000117; Casein kappa. Pfam; PF00997; casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
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   27
                                                                                                                   l Similarity
37; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 YORRPAIAINNEYVERTYYANEAVVREHAQIEQROYLENSHEETVVRRENLHESE
                                                       1 YORRPAIAINNEYVERTYYANEAVVREHAQIEQRQYLENSHEETVVRRENLHESE
                                                                                                                                                                                                                                                                                                                                  PD003689; Casein_kappa; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67.9%;
Similarity 67.3%;
   YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    145 AA;
                                                                                                                                                                                                                                            145 AA;
                                                                                                                      Conservative
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                                                                                                                                                                                                                                            16277 MW; B806C09AAB3CB30D CRC64;
                                                                                                                                             67.9%;
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                                                                                                                      9
                                                                                                                      Score 207; DB 6;
Pred. No. 7.5e-18;
6; Mismatches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 207; DB 6;
Pred. No. 7.5e-18;
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RESULT 11
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Q865D1
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                                                                                                   Query Match
Best Local S
Matches 37
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Best Local S
Matches 37
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                                                                                                                                                                                                      NON TER
                                                                                                                                                                                                                                                                                          Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes in North
American bears ";
Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL, AF439933, AAG63806.1;
GO: GO:005576; C:extracellular; IEA.
InterPro; IPR000117; Casein_kappa.
Pf00997; casein_kappa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2003 (TrEMBLrel. 24,
01-JUN-2003 (TrEMBLrel. 24,
01-OCT-2003 (TrEMBLrel. 25,
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Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes in North
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-UIN-2003 (TrEMBLrel. 24, Created)
01-UIN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Kappa casein (Fragment).
Ursus maritimus (Polar bear) (Thalarctos maritimus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN=6519_4;
Cronin M.A., N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kappa casein (Fragment).
Ursus maritimus (Polar bear) (Thalarctos maritimus).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases EMBL; AF439931; AAO63804.1; -.
GO; GO:0005576; C:extracellular; IEA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
                                                                                                                                                                                                                                                                         Pfam; PF00997; casein_kappa; 1.
ProDom; PD003689; Casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q865D0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD003689; Casein_kappa; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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Pfam; PF00997; casein_kappa; 1.
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                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity 67.3
37; Conservative
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     YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
                                                   YORREAIAINNEYVERTYYANEAVVREHAQIEQRQYLENSHEETVVRRENLHESE 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF 81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eutheria; Carmivora; Fissipedia; Ursidae; Ursus.
                                                                                                                                                                                                      145
145 AA;
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145 AA;
                                                                                                      Conservative
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                                                                                                                                                                                                    145
16263 MW;
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                                                                                                                              67.9%;
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Pred. No. 7.5e-18;
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                                                                                                                              Score 207; DB 6;
Pred. No. 7.5e-18;
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                                                                                                                                                                                                      1817C09AAB3CB30C CRC64;
                                                                                                      Mismatches
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                                                                                                                                                 Length
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                                                                                                   Indels
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Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 37
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01-JUN-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
STRAIN-GKZ0 8, and SAKB 7;
Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes ir
American bears.";
Submitted (CCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF439905; AA063788.1; -.
EMBL; AF439925; AA063800.1; -.
EMBL; AF439925; AA063800.1; -.
EMBL; AF439925; C:extracellular; IEA.
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01-UTN-2003 (TrEMBLrel. 24, Last sequence update)
01-UTN-2003 (TrEMBLrel. 25, Last annotation update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Kappa casein (Fragment)
Ursus americanus (American black bear).
Bukaryota, Metazoa; Chordata, Craniata, Vertebrata; Euteleostomi;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kappa casein (Fragment).
Ursus arctos (Brown bear) (Grizzly bear).
Eukaryota, Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Carnivora; Fissipedia; Ursidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases. EMBL; AF439901; AA063784.1; -. EMBL; AF439917; AA063796.1; -. EMBL; AF439918; AA063797.1; -. EMBL; AF439918; CA063797.1; -. EMBL;
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                                                                                                                                                                             ProDom; PD003689; Casein_kappa; 1.
NON_TER 1 1
NON_TER 145 145
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Cronin M.A:, Nelson R.J., Amstrup S.C., Wickliffe J.;
"Variation in the MHC class II DQB and K-casein genes in North
                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                           InterPro; IPR000117; Casein_kappa.
Pfam; PF00997; casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q861U3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000117; Casein_kappa.
Pfam; PF00997; casein_kappa; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27 YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
l Similarity
37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   l Similarity 67.37; Conservative
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                                                                                                                                             145 AA;
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(TrEMBLrel. 24,
(TrEMBLrel. 25,
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   Conservative
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                           67.9%;
67.3%;
                                                                                                                                         16263 MW;
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6
Score 207; DB Pred. No. 7.5e 6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 207; DB 6; Length 145; Pred. No. 7.5e-18; 6; Mismatches 12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                 1817C09AAB3CB30C CRC64;
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                                       .5e-18;
                                                                          DB 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                  Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               genes in
       Indels
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   0
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   Gaps
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В S

27

YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF 55

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RESULT 14
Q861T9
ID Q861T
D7 Q861T
D7 Q861T
D7 01-JU
D7 01-JU
D7 01-JU
D7 01-JU
D7 01-G
C Eukar
OC Mamma
OX NCEI
RN NCII
RP SEQUE
RC STRAI
RT Ameri
RT Ameri
RT Ameri
DR EMBL;
DR EMBL;
DR EMBL;
DR Ffam;
DR Ffam;
DR Pfam;
DR NON T
FT NON T
FT NON T
SEQÜE
                ADD DR RETTER DR RESERVE OF THE CORRESPONDED FROM THE CORRESPONDED
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Q861T8
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Best Local S
Matches 37
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C STRAIN-GN6-8, and GN7-3;
C Cronin M.A., Nelson R.J., Amstrup S.C., Wickliffe J.;
T "Variation in the MHC class II DQB and K-casein genes in No. American bears.";
T American bears.";
Submitted (CCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF439912; AA063792.1; -.
R EMBL; AF439912; AA063793.1; -.
R EMBL; AF439912; AA063793.1; -.
R EMBL; AF439912; Casein Kappa.
Theorem PRO09576; C:extracellular; IEA.
InterPro; IPR000117; Casein Kappa.
Ffam; PF00997; Casein Kappa.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q861T8 PRELIMINARY; PRT; 145 AA.
Q861T8;
Q861T8;
Q1-JUN-2003 (TrEMBLrel. 24, Created)
Q1-JUN-2003 (TrEMBLrel. 24, Last sequence update)
Q1-JUN-2003 (TrEMBLrel. 25, Last annotation update)
Q1-CCT-2003 (TrEMBLrel. 25, Last annotation update)
Q1-CCT-2003 (TrEMBLrel. 25, Last annotation update)
Q1-CCT-2003 (TrEMBLrel. 26, Last annotation update)
Q2-CCT-2003 (TrEMBLrel. 26, Last annotation update)
Q3-CCT-2003 (TrEMBLrel. 26, Last annotation update)
Q4-CCT-2003 (TrEMBLrel. 26, Last annotation update)
Q4-CCT-2003 (TrEMBLrel. 24, Created)
Q5-CCT-2003 (TrEMBLrel. 24, Created)
Q661T8;

                                                                                                    Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF439902; AA063785.1; -.
EMBL; AF439904; AA063787.1; -.
EMBL; AF439913; AA063794.1; -.
GO; GO:0005576; C:extracellular; IEA.
InterPro; IFR000117; Casein_kappa.
Pfam; PF00097; Casein_kappa; 1.
ProDOm; PD003689; Casein_kappa; 1.
                ProDom; I
NON_TER
NON_TER
SEQUENCE
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NON_TER
NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=AB587_8, AB590_9, and MTB2_10;
Cronin M.A., Nelson R.J., Amstrup S.C.
"Variation in the MHC class II DQB and
                                                                                                                                                                                                                                                                                                                                                                                                                                                 American bears.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2003 (TrEMBLrel. 24, Created)
01-JUN-2003 (TrEMBLrel. 24, Last sequence update)
01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
Kappa casein (Fragment).
Ursus arctos (Brown bear) (Grizzly bear).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammania; Eutheria; Carnivora; Fissipedia; Ursidae; Ursus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9643;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9644;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q861T9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 YQRRPAIAINNEYVERTYYANEAVVREHAQIEQRQYLENSHEETVVRRENLHESE 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity 67.3
37; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PD003689; Casein_kappa; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF
            145
145 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                145 AA;
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145
16253 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         145
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 207; DB 6; L
Pred. No. 7.5e-18;
6; Mismatches 12;
    3538109AAB3CB30F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3538109AAB269A0F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             , Wickliffe J.;
K-casein genes in North
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 145;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
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Best
    Matches
                      Query Match
             Loca1
  1 Similarity 37; Conserv
  Conservative
          67.9%;
Score 207; DB 6;
Pred. No. 7.5e-18;
6; Mismatches 12
                   Length 145;
 Indels
0;
Gaps
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0

Ş 밁 27 1 YQRRPAIAINNPYVPRTYYANPAVVRPHAQIPQRQYLPNSHPPTVVRRPNLHPSF YPHRPAVPINHQYVPYPYYAKPVAVRPYAQIPQWQVLPNAYPPTVVHRPHLHPSF 81 ភូ

Search completed: September Job time: 103.933 secs 1, 2004, 00:15:33

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Minimum DB seq length: 0
Maximum DB seq length: 200000000
                                                                                                                                                      Database
                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                   Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OM protein - protein search, using sw model
                                                                                          A_Geneseq_29Jan04:*
1: geneseqp1980s:*
2: geneseqp1990s:*
3: geneseqp2000s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-508-095-19
267
1 GRRRSVQWCAVSQPEATKCF.....VRGPPVSCIKRDSPIQCIQA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            August 31, 2004, 23:54:24; Search time 115.52 Seconds (without alignments) 117.402 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                           1586107 segs, 282547505 residues
                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                 Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Copyright
              geneseqp1990s:*
geneseqp2000s:*
geneseqp2001s:*
geneseqp2002s:*
geneseqp2003as:*
geneseqp2003bs:*
geneseqp2004s:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GenCore version 5.1.6 (c) 1993 - 2004 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                           1586107
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Score	Query Match	Length	DB	ID	Description
1 1 1 1 1	267		48	N !	AAW93883	83 Bi
N	261	97	49	N	93	3884 Bifidoba
w	261	•	51	w	8	817 Human la
4.	261	•	52	N	AAR87906	r87906 Human la
ຫ	261	•	52	N	19	r91192 Lactofer
თ	261	97.8	54	N	AAR88218	38218 Amino ac
7	261	•	690	4	AAG77908	g77908 Human la
ထ	261	•	690	v	ABG80724	4 Codon op
9	261	•	690	ທ	2788	7884
10	261	•	692	w	AAY58733	3 Human la
11	261	•	692	4,	AAB97382	Aab97382 Human lac
12	261	•	692	4.	AAG77906	6 Human la
13	261	•	692	v	AAE28002	2 Human
14	261	•	693	2	**	Aar85146 Lactoferr
15	261	•	705	N	AAR22423	423 Human
16	261		705	N	AAY31152	31152 Human la
17	261	•	708	ν	10	2424 Human la
18	261		708	N	15	1153 Human la
19	261	•	709	N	w	198 Human la
20	261	٠	709	N	w	199 Human
21	261		711	N	388	880 Bovine a
22	261		711	w	AAY77578	77578 Human la
23	261	٠	711	ω	383	831 Human la
24	261		711	4	AAB36843	Human
25	261	•	711	4.	AAG64828	828 Chronic

45	44	43	42	41	40	39	38	37	36	ω G	34	33	32	31	30	29	28	27	26
254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	254	255	256	261
	<u>.</u>		ū		5	٠	5	5	ū	5	υ •	5	95.1	5	5	ហ		Ū	
711	711	711	711	711	711	711	709	709	709	709	709	709	690	51	51	49	51	689	711
4	ω	N	N	N	N	N	7	4	w	w	N	N	N	W	w	N	w	4	7
AAE02341	AAB08182	AAW86021	AAW57317	AAW09342	AAR43653	AAR08033	ADE76659	AAB36842	AAB03830	AAY77577	AAW53879	AAW21695	AAW71180	AAB22822	AAB22823	AAW93882	AAB22824	AAG77909	ADE76661
Aae02341	Aab08182	Aaw86021	Aaw57317	Aaw09342	Aar43653	Aar08033	Ade76659	Aab36842	Aab03830	Aay77577	Aaw53879	Aaw21695	Aaw71180	Aab22822	Aab22823	Aaw93882	Aab22824	Aag77909	Ade76661
Human lac	Amino aci	Human lac	Human lac	Human lac	Lactoferr	Human lac	Human lac	Protein e	Human lac	Human lac	Human lac	Human lac	Mutant hu	Lactoferr	Lactoferr	Bifidobac	Lactoferr	Human lac	Human lac

ALIGNMENTS

RESULT AAW938	1
Χij	AAW93883 standard; peptide; 48 AA.
AC.	AAW93883;
3 %	,s
4	25-JUN-1999 (first entry)
X E i	Bifidobacterium bifidus stimulating peptide 19.
₩.	peptide; protease;
Ş	bacteria; fungi; yeast; protozoa; virus; mycoplasma; filaria; plasmodia
\$ \$	nflammation; microb
\$ \$ \$	vaginal microflora.
SS	Bifidobacterium bifidum.
Z	
E T	Disulfide-bond 945
Y FT	Disulfide-bond 1936
Y PN	WO9914231-A2.
\$ B \$	25-MAR-1999.
PF F	16-SEP-1998; 98WO-EP005899.
PR	
PR	-FEB-1998; 98DE-01005385
Y P A	(FORS/) FORSSMANN W.
\$ E \$	Forssmann W, Zucht H, Liepke C;
# # P P	WPI; 1999-244022/20.
\$ E \$	Milk-derived peptides that stimulate Bifidobacterium bifidus.
88	Claim 2; Page 3; 25pp; German.
88	d bifidogenic peptides and thei
33	combinations of them produ
9 6	or human milk
ი ი ი ი	ormance liquid chromatography (

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RESULT 2
AAW99884
ID AAW99884
ID AAW99884
AC AAW9
AC Bifi
XX Bifi
XX Bifi
XX KW dinfe
KW Wojs
XX Bifi
XX Key
FT Dist
XX WOjs
AC AC Chae
PR 11-1
AC ACC Che
PR CC Che
CC Che
CC Che
AAW99884
AAW998A
AAW99A
AAW99A
AAW99A
AAW99A
AAW99A
AAW9A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Disulfide-bond
Disulfide-bond
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bifidobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            infection;
diarrhoea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bifidogenic perbacteria; fung
active derivatives or fragments, and conchemical coupling. Such are produced fro treatment for 2 hr with proteases, then
                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-SEP-1997;
11-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16-SEP-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9914231-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            vaginal microflora.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bifidobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27-AUG-2003
25-JUN-1999
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                                                                                                                                                                                                                                                                                                                                 Forssmann W,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             25-MAR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAW93884 standard; peptide;
                                                                                         This invention describes milk-derived bifidogenic
                                                                                                                                                  Claim 2;
                                                                                                                                                                                                           Milk-derived peptides that
                                                                                                                                                                                                                                                                                                                                                                                              (FORS/)
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                                                                                                                                                                                                                                                                                                                                                                                              FORSSMANN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     c peptide; protease; treatment; microbe-related disease; fungi; yeast; protozoa; virus; mycoplasma; filaria; plasmodia; inflammation; microbial induced tumour; degenerative disorder colic; oral microflora; intestinal microflora; caries;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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(first entry)
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98DE-01005385
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100.0%; Pr
                                                                                                                                                     German
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 267; DB 2; L
Pred. No. 5.7e-29;
                               d bifidogenic peptides and their combinations of them produced by from bovine or human milk by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
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subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 CC mm (by dialysis or reverse-phase HPLC) and tested for activity by growing CC Bifidobacterium bifidus and Escherichia coli in presence of the CC selected where Bw = germ count after 16 hr culture of B. bifidus in 50% CC Elliker broth containing peptide at 0.2 mg/ml, BO = germ count under CC culture of E. coli in 3 g/l tryptic broth containing peptide at 0.2 mg/ml, BO = germ count under CC control. The peptides AAW93865-W93888 are used to treat microbe-related CC diseases caused by bacteria, fungi, yeast, protozoa, viruses, mycoplasma, CC filaria and plasmodia, e.g. infections, in flammation, microbially induced CC cral, intestinal or vaginal microflora, or caries. (Updated on 27-AUG-CC 2003 to correct OS field.)
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AAB22817
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      The invention relates to proteolytic fragments of lactoferrin (LF) and variants thereof which act as host-defence peptides, having antimicrob and endotoxin-neutralising activity. The peptides are useful for treatment of bacterial and fungal infections, and may be particularly used for treating sepsis, tuberculosis and leprosy. The peptides are a useful for treating sepsis, tuberculosis and leprosy.
                                                                                                                                           Antimicrobial/endotoxin neutralizing polypeptide generated by digestion of lactoferrin, useful for treatment of bacterial an infections, and for preventing contamination of e.g. food pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human lactoferrin fragment; host-defence peptide; antimicrobial; endotoxin neutralisation; Gram negative bacterium; lipopolysacch LPS; antibacterial; antifungal; sepsis; septic shock; tuberculos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Human lactoferrin
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                                                                                                  Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens.
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                                                                                                                              living cells, and
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Pred. No.
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                                                         fragments of lactoferrin (LF) and sfence peptides, having antimicrobial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3.9e-28;
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                                                    Query Match
Best Local Similarity
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Best Local
                                                                                                                             The sequence is one of six peptides disclosed as having inhibitory effect against viral infection. The peptides are derived from lactoferrin. Their activity is demonstrated against cytomegalovirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               microorganisms and endotoxin (lipopolysaccharide, LPS), such as food products, tissue, living cells, blood, drugs, glassware and surgical equipment. Sequences AAB22817 and AAB2282-B22827 represent specifically claimed human lactoferrin-derived polypeptides of the invention. The present sequence is a 6 kD fragment of human lactoferrin comprising the 1-terminal 51 residues produced via cathepsin D digestion
                                                                                                                                                                                                           Inhibitor against viral infection having sequence from lactoferrin.
                                                                                                     Sequence
                                                                                                                                                                                   Claim
                                                                                                                                                                                                                                                    WPI; 1995-144726/19.
                                                                                                                                                                                                                                                                                                        02-SEP-1993;
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               RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA
RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA
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                                                                                                                                                                                 2; 10pp; Japanese.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "each Cys residue may be in 1 form a disulphide bond with another disulphide bond is exemplified" 20...37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                            /note= "each Cys residue may be in reduced form form a disulphide bond with another Cys residue. disulphide bond is exemplified"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                peptide;
                                                            97.8%;
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                                                 Score 261; DB 2; Pred. No. 4.2e-28; 0; Mismatches 0;
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Pred. No. 4.1e-28;
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AAR91192
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Best Local S
Matches 47
                                                                                                                                         Recombinant vector; human; lactoferrisin; antibacterial regulatory sequence; tac; promoter; shuttle; vector; pGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The present sequence is one of four new peptides (see AAR91191 - AAR91193) obtained by enzymatically decomposing lactoferrin using protease. The peptides are immunoactivators which induce blastogenesis lymphocytes and are particularly useful for treating cytomegalovirus infection. They can be used in drugs and cosmetics and can be added to
                                                                                                                                                                                                                                                 Amino
                                                                                                                                                                                                                                                                                                                    12-JUN-1996
                                                                                                                                                                                                                                                                                                                                                                                       AAR88218;
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immuno:activators,
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lymphocyte blastogenesis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (SNOW ) SNOW BRAND MILK PROD
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47; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 2; lipp; Japanese.
                                                                                                sequence; tac; promoter; shuttl
ma Virus; long terminal repeat;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97.8%; Scilarity 100.0%; I Conservative 0;
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20. .37
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                                                                                                                                                                                                                                                                                                                                                                                                                                                       peptide;
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                                                                                                                                                                                                                                                                                                                 entry.
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37
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                                                                                                                                                                                                                                              lactoferrisin antibacterial peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human lactoferrin - a preventing infection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 261; DB 2; Pred. No. 4.2e-28;
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                                                                                                    pRSVNot; lactoferricin
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cytomegalovirus
                                                                                                                                         lal peptide;
pGEX2; GAL1;
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RESULT 7
AAG77908
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Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                              Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                 Homo
                                                                                                                                                                                                                                                                                                                                                                                                                           Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; se anaemia; myelopoiesis; reperfusion injury; cytokine release; proteoglycan; hLF-2N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A recombinant vector in which a DNA sequence encoding at least the generic lactoferrisin antibacterial peptide AAR88216 (specific examples of which are given in AAR84083-85) is inserted, pref. downstream of the vector's regulatory sequence, is claimed. Pref. examples of amino acid sequences contg. the above peptide are given in AAR8217/18. The regulatory sequence is the tac promoter from shuttle vector pGEX2, the GAL1 promoter from vector pXGM2 or Rous Sarcoma Virus long terminal repeat from vector pRGNNot
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Peptide
                                                                     27-MAR-2000;
27-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Human lactoferrin variant
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                             (PHAR-) PHARMING INTELLECTUAL
                                                                                                                                          27-MAR-2001; 2001WO-NL000253.
                                                                                                                                                                                            04-CCT-2001
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47; Conserv
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al peptide.
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                                                                       2000EP-00201110.
2000US-0193352P.
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100.0%; Pr
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Pred. No.
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RESULT 8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The sequence represents the human lactoferrin (hLF) protein variant hLF-2N. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel diseases and excess anemals, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administered. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence given in the sequence listing of the specification
                                                                                                                                                                                                14-FEB-2001;
14-FEB-2001;
02-MAY-2001;
                                                         producing heterologous polypeptide in plant grain, by culturing transformed plant to form a grain-producing transforming plant, recovering transgenic grains containing polypeptide from transform.
                                                                                                            WPI; 2002-657592/70.
N-PSDB; ABS66515.
                                                                                                                                                                                                                                                                                                                            Homo sapiens
                                                                                                                                                                                                                                                                                                                                                     seed
                                                                                                                                                                                                                                                                                                                                                                Transformed plant; heterologous transcription
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2001US-0269199P.
2001US-00847232.
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100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 7.9e-27; thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                  factor; transgenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 690
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47
                                                             plant, and transformed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                    plant;
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The invention describes a method of producing a heterologous polypeptide

Exampe 15; Page 117;

230pp;

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RESULT 9
AAE27884
ID AAE2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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Best Local
                                                                                                                                                                      Huang N,
                                                                                                                                                                                                                                                                14-FEB-2001;
02-MAY-2001;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anti-microbial;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Human codon optimised lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27-DEC-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 690 AA;
Improved feed for production animals, comprising plant-derived feed ingredients, and seed composition containing flour, extract, or malmature monocot seeds and heterologous seed-produced anti-microbial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            producing a transgenic plant
                                                                                                                        2002-682708/73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
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47; Conserv
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                                                                                                                                                                                                                     VENTRIA BIOSCIENCE
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                                                                                                                                                                   Rodriguez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           improvement;
ial; poultry;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                2001US-0269188P
2001US-00847232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers 319. .320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Encoded by CTG
                                                                                                                                                                      RL,
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                                                                                                                                                                   Hagie
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  plant-derived feed; antibiotic;
lactoferrin; flour; malt.
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Pred. No. 7.9e-27;
                                                                                                                                                                      FE;
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                           or malt
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Example 7; proteins

Page 148-150; 175pp;

English

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RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA

Query Match Best Local S Matches 47

l Similarity 47; Conserv

ilarity 100.0%; Conservative

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Mismatches

97.8%;

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Length 692;

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RESULT 10
AAY58733
ID AAY58
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Best Local Similarity
Matches 47; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to improved feed for production animals, comprising one or more plant-derived feed ingredients, substantially unsupplemented with small-molecule antibitics and as an additive a seed composition containing a flour, extract or malt obtained from mature monocot seeds and one or more heterologous seed-produced anti- microbial proteins in substantially unpurified form. The invention is useful as a feed for production animals such as poultry and hoofed farm animals. The present sequence is human codon optimised lactoferrin. This sequence is used in
                                                                             The present sequence is that of human lactoferrin. The invention relates to a synthetic gene (see AAZ58122) that encodes human lactoferrin but which has codon usage designed to maximise expression in plants. Transgenic plants that express human lactoferrin in a tissue-specific manner, especially in the seeds, can be used in processes for the production of functional vegetal milk, fruit juices, fruit and/or vegetable homogenized foods (claimed). The transgenic plants are selected from solanaceae, cereals, leguminosae, fruit bearing plants and horticultural plants, especially soybean, tobacco and rice
                                                  Sequence
                                                                                                                                                                                                                                                Disclosure; Page 73-77; 93pp; English.
                                                                                                                                                                                                                                                                              Synthetic polynucleotide encoding human lactoferrin, used for of functional foods, vegetal milks and human lactoferrin.
                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAZ58122.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200004146-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human lactoferrin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lactoferrin; human; transgenic plant
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the invention
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Score 261; DB 3; Pred. No. 7.9e-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 261; DB 5; pred. No. 7.9e-27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                  production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 49

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AAB97382
ID 9AB97
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                                                                                                        Query Match
Best Local S
Matches 47
                                                                                                                                                                                                                                                                This invention relates to fragments (between 6 and 26 amino acids) of the human lactoferrin hLF protein (represented by the present sequence). Neterminal hLF peptides have antimicrobial activity. The peptides of the invention are used to treat microbial infections, especially infections by gram positive or negative bacteria, particularly listeria, monocytogenes, Klebsiella or Escherichia species, especially L. monocytogenes, S. aureus and E. coli. Other uses include reducing inflammatory response by neutralising heparin or lipopolysaccharide or by reducing cytokine production and neutrophil degranulation, inhibiting entry of viruses such as cytomegalovirus, herpes simplex virus 1 or HIV into cells, inhibiting myelopoiesis and reducing production of GM-CSF (granulocyte/macrophage colony stimulating factor)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New polypeptides comprising the N-terminal region of human lactoferrin protein exhibit higher antimicrobial activity than the full length protein and are useful to treat bacterial infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 55-57; 59pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Human; lactoferrin; hLF; N-terminal; antimicrobial; heparin; inflammatory response; cytokine production reduction; neutrophil degranulation; myelopolesis inhibition.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Domain
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                                                                                                                                                                                                                       Sequence
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11-NOV-1999;
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                                                                                                           13imilarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PHARMING
                                                                                                                                                                                                                          692
                                           RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA 48
  RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA
                                                                                                           Conservative
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99US-0164975P.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Fragments of the N-terminal
referred to in the claims"
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100.0%; Py
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                                                                                                        Score 261; DB; Pred. No. 7.9
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                                                                                                        7.9e-27;
thes 0;
                                                                                                                                                                DB 4;
                                                                                                                                                             Length 692;
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RESULT 13
AAE28002
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AC AAE28
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AC AAE28
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DT 13-DE
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DE Human
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ID AAG77
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The sequence represents the human lactoferrin (hLF) protein. The method of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect respons to administration of lactoferrin. Therefore large doses of lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; se anaemia; myelopoiesis; reperfusion injury; cytokine release;
  Human codon optimised lactoferrin.
                                                   13-DEC-2002
                                                                                                                                                       AAE28002 standard; protein; 692 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 692
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Use of lactoferrin for treatment of infectious diseases, inflammatory diseases and excess of heparin.
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27-MAR-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           can be administered
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                                                                                                                                                                                                                                                                                                                                                                                      l Similarity 47; Conserv
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2000US-0193352P.
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                                                   (first entry)
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/label= Cationic_domain
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2. .5
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100.0%; Pr
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROPERTY
                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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RESULT 14
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Best Local S
Matches 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a nutritionally enhanced food comprising one or more plant-derived food ingredients, and as an additive, a seed composition containing a flour, extract, or malt obtained from mature monocot seeds and one or more seed-produced human milk proteins in substantially unpurified form. The nutritionally enhanced food and food additive compositions are useful for improving infant formula. Infant formulas containing the recombinant human milk proteins are useful in supplementing or enhancing the diet of infants, parricularly very-low birth weight infants. The present sequence is human codon optimised
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo
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infant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           New nutritionally enhanced food compositions, useful for improving infant formula, or supplementing or enhancing the diet of infants, particularly very-low birth weight infants.
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                                                                                                                                    Lactoferrin; antiseptic; dietary supplement; Pichia pastoris.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 692 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14-FEB-2001; 2001US-0269199P. 02-MAY-2001; 2001US-00847232.
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                                                                                 Homo sapiens
                                                                                                                                                                                                                Lactoferrin
                                                                                                                                                                                                                                                                        02-FEB-1996
                                                                                                                                                                                                                                                                                                                           AAR85146
                                                                                                                                                                                                                                                                                                                                                                           AAR85146 standard;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              sapiens.
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formula; lactoferrin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9; Page 104; 179pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRRSVOWCAVSOPEATKCFOWORNMRKVRGPPVSCIKEDSPICCIOA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA
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sequence shown as SEQ ID
specification"
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                                                                                                                                                                                                                                                                        entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 261; DB 5;
Pred. No. 7.9e-27;
0; Mismatches 0;
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                                                                                                                                                             iron sequestration;
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17-DEC-2001
05-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         cDNA encoding human lactoferrin (AAR85146) was isolated from a human mammary gland library and inserted into vector pUC118. Expression in Pithia pastoris GTS 115 (His4) allowed the prodn. of large amounts of lactoferrin protein, useful as an antiseptic, dietary supplement, etc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New isolated DNA encoding human inhibiting microbial growth and iron or retarding food spoilage.
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N-PSDB; AAT02999.
                                                                                                                         Misc-difference
                                                                                                                                            Misc-difference
                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                  anti-bacterial; anti-viral; anti-fungal; Colony stimulating factor; CSF;
release; leukaemia; breast cancer; hormonal regulation.
                                                                                                                                                                                                                                                                Human lactoferrin deduced from clone HLF 1212.
                                                                                                                                                                                                                                                                                                                         AAR22423;
                                                                                                                                                                                                                                                                                                                                            AAR22423 standard; protein; 705
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 693 AA;
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                                    31-MAY-1991;
                                                       31-MAY-1991;
                                                                          18-FEB-1992.
                                                                                             USN7707502-N
                                                                                                                                                                                                              Homo sapiens
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                                                                                                                                                                                                                                                                                                                                                                                           RRRSVOWCAVSOPEATKCFOWORNMRKVRGPPVSCIKRDSPIQCIOA 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kurecki
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                                                                                                                                                                                                                                                                                  (revised)
(first entry)
                                                        91US-00707502
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                                     91US-00707502
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                                                                                                                                                                                   Location/Qualifiers
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                                                                                                                 "Substitution,
                                                                                                                                   "Substitution,
                                                                                                                                                                         "Insertion, c.f. B.F.Anderson et
                                                                                                                                                       "Substitution,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gollnick
                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 261;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      lactoferrin protein - useful for iron deficiency, and for sequestering
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                                                                                                                                    c.f. B.F.Anderson
                                                                                                                                                       c.f.
                                                                                                                 c.f. B.F.Anderson
                                                                                                                                                                                                                                                                                                                                                                                                                                  . 7.9e-27; ches 0;
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                                                                                                                                                       B.F.Anderson
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 693
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Search completed: September 1, 2004, 00:09:49 Job time: 115.52 secs
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                                                                                                                                                                                                                                                                                                                                                                                                                                              CC plated in host cells 71090, filter-lifted and probed with mouse CC plated in host cells 71090, filter-lifted and probed with mouse CC lattoferrin cDNA T267. Positive clones were plaque-purified and the CC inserts subcloned into the EcoRI site of Bluescript II SX+. The CC recombinant clones were transformed into XLI Blue cells. The longest consert (HLF 1212) was sequenced and was 2117bp in length. The amino acid sequence coded for by HLF 1212 has 4 sites that differ from the protein CC previously published revised amino acid sequence derived from the protein CC (B.F.Anderson et al., J.Mol Biol. 209: 711-734, 1989). Also contained contained to the contained contained
                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                           Sequence 705 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human lactoferrin gene and promoter - used for producing protein for treating e.g. AIDS, neutropenia, skin infections, vaginal infections or septic shock.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI; 1992-113934/14.
N-PSDB; AAQ23453.
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                                                                                                                        2 RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA 48
                                                                                                                                                                                                                                                               47;
                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                        97.8%; Score 261; DB 2; 100.0%; Pred. No. 8.1e-27; ative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                      Length 705;
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Sequence 2, Appli Sequence 6, Appli Sequence 6, Appli Sequence 8, Appli Sequence 8, Appli Sequence 9, Appli Sequence 29, Appli Sequence 10, Appli Sequence 17, Appli Sequence 17, Appli Sequence 17, Appli Sequence 10, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli Sequence 4, Appli

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Title:
Perfect score:
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Maximum DB
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
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length: 2000000000
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Match
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     Issued_Patents_AA:*

| Cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
| Cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
| Cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
| Cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
| Cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
| Cgn2_6/ptodata/2/iaa/backfIles1.pep:*
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US-08-464-182A-2
US-08-724-586-2
US-08-724-586-2
US-09-421-632-2
US-09-932-190-2
US-08-655-640-4
US-08-655-640-4
US-08-164-019-4
US-08-164-019-4
US-08-164-019-8
US-08-164-167-4
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US-08-456-118-2
US-09-633-739-2
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  sequence
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Patent No. 5849885
GENERAL INFORMATION:
APPLICANT: Nuijens, Jan H.
APPLICANT: Van Veen, Harry H.
TITLE OF INVENTION: Isolation of Landers of Sequences: 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 1
US-08-464-182A-2
                                                                                                                              TELEPHONE: (650) 326-2400
TELEPAX: (650) 326-2422
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 54 anino acids
TYPB: amino acid
STRANDEDNNES: not relevant
TOPOLOGY: not relevant
                                                                                                                                                                                                                                                                                                                            CORRESCE: TOWNSEND and TOWNSEND and CREW LLE STREET: Two Embarcadero Center, 8th Floor CITY: San Francisco
STATE: CA
COUNTRY: USA
ZIP: 94111
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/464,182A
FILING DATE: 05-UN-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION UNMBER: US 08/406,271
FILING DATE: 09-WAR-1995
CLASSIFICATION UNMBER: US 08/198,321
APPLICATION UNMBER: US 08/198,321
APPLICATION NUMBER: US 08/198,321
FILING DATE: 16-FBB-1994
AFTORNEY/ACENT INFORMATION:
NAMB: ADD1e, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOKET NUMBER: 016994-004920US
TELEDCOMMUNICATION INFORMATION:
TELEDCOMMUNICATION INFORMATION:
TELEDCOMMUNICATION INFORMATION:
TELEDCOMMUNICATION INFORMATION:
                                                                                                             MOLECULE TYPE:
                                 NAME/KEY:
     OTHER INFORMATION: /note= "HLF cDNA of GPE"
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1..54
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US-08-466-271-6
US-08-693-274A-7
US-07-755-161A-8
US-08-256-771-30
US-08-256-771-30
US-08-381-284-29
US-08-693-274A-10
US-08-466-271-17
US-07-755-161A-10
US-07-755-161A-10
US-08-466-182A-17
US-07-891-174-10
US-07-891-174-10
US-07-891-174-10
US-08-464-182A-4
US-08-464-271-4
US-08-464-271-4
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US-08-464-182A-2

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Ş RESULT 3 US-08-724-586-2 ; Sequence 2, Application US/08724586 ; Patent No. 6066469 밁 8 RESULT 2 US-08-406-271-2 밁 US-08-406-271-2 Query Match Best Local Similarity Sequence 2, Appli Patent No. 591991 Matches Query Match Matches GENERAL INFORMATION:
APPLICANT: Nuyens, Jan H.
APPLICANT: Van Veen, Harry H.
TITLE OF INVENTION: Isolation of Lactoferrin from Milk
NUMBER OF SEQUENCES: 28 TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEPAX: (415) 326-2422
INFORMATION FOR SEQ ID NO: 2: PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/198,321
FILING DATE: 16-FEB-1994
ATTORNEY/AGENT INFORMATION:
NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 016994-0 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS MOLECULE TYPE: SEQUENCE CHARACTERISTICS: SOFTWARE: PatentIn Release #1.0, Version CURRENT APPLICATION DATA: FEATURE: CORRESPONDENCE ADDRESS: STREET: Local LOCATION: 1..54
OTHER INFORMATION: /note= "HLF cDNA of GPE" NAME/KEY: Peptide LOCATION: 1..54 FILING DATE: 09 CLASSIFICATION: STRANDEDNESS: not relevant TOPOLOGY: not relevant APPLICATION NUMBER: COUNTRY: ADDRESSEE: ENGTH: 47; 47; 2 RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA 48 2 RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA 48 94105 Similarity San Francisco : 54 amino acids amino acid RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 49 Ç Application US/08406271 RRRSVOWCAVSOPEATKCFOWORNMRKVRGPPVSCIKRDSPICCIOA 49 E: TOWNSEND and TOWNSEND and CREW LLP One Market Plaza, Steuart Street Tower, USA 97.8%; Silarity 100.0%; Conservative 0; Conservative peptide 09-MAR-1995 97.8%; Score 261; DB 2; 100.0%; Pred. No. 1.1e-28; US/08/406,271 016994-004910 Score 261; DB 2; Pred. No. 1.1e-28; 0; Mismatches 0; Mismatches DB 2; Length 54; Length 54; Indels Indels 20th 0 0 0 0

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RESULT 4
US-09-421-632-2
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TELEFAX: (202) 393-5350;
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/09421632 Patent No. 6277817 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Kruzel
                                                                                                                                                                              APPLICANT: Kurecki, Tomasz
APPLICANT: Gollnick, Paul D.
APPLICANT: Doyle, Darrell J.
TITLE OF INVENTION: Cloning, Expression, and Uses
TITLE OF INVENTION: Lactoferrin
NUMBER OF SEQUENCES: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PC-DOS/MS-DOS
CURRENT APPLICATION NUMBER: US/08/724 cor
FILING DATE: 30-Spr
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APPLICANT:
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PRIOR APPLICATION NUMBER: US 08/238,445
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Cloning, EXTITLE OF INVENTION: Lactoferrin NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Pelear ""
                                                                                                        ADDRESSEE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W. CITY: Washington D.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Player, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET:
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47; Conserv
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400 Seventh St. N.W.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      97.8%; Score 261; DE ilarity 100.0%; Pred. No. 2e-Conservative 0; Mismatches
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Gollnick, Paul D.
Doyle, Darrell J.
VENTION: Cloning, Expression, and Uses of Human
                                                                                            U.S.A.
                                                                                                                                                                                                                                                                                              Kruzel, Marian L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kruzel,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 261; DB 3; pred. No. 2e-27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10505/P58185C
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Gaps

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PatentIn Release #1.0,

Version #1.25

CURRENT APPLICATION

DATA:

US/09/421,632

CATION NUMBER:

FILING DATE: CLASSIFICATION:

NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 638-6666
TELEPAX: (202) 393-5350
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 694 amino acids
TYPE: amino acids

TOPOLOGY:

amino acid

linear

PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/7
FILING DATE:
ATTORNEY/AGENT INFORMATION:

08/724,586

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RESULT 5
US-09-932-190-2
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GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
INFORMATION FOR SEQ ID NO:
                                                     PRIOR APPLICATION DATA
APPLICATION NUMBER: US/08/724,586
FILING DATE: 30-SEPT-1996
APPLICATION NUMBER: US 08/238,445
FILING DATE: 05-MAY-1994
ATTORIES/AGRAT INFORMATION:
NAME: Player, William E.
REGISTRATION NUMBER: 31,409
REFERENCE/DOCKET NUMBER: 10505/P58185C
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PATENTIN Release #1.0, Version:

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/932,190

FILING DATE: 17-Aug-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Cloning, Expression, and Uses of Human Lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Kruzel, Marian L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     σ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17; Conservative
                                                                                                                                                                                                                                                   CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY: Washington D.C.
COUNTRY: U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/09932190
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                  TELEPHONE: (202) 638-66
TELEFAX: (202) 393-5350
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ADDRESSEE: Jacobson, Price, Holman & Stern STREET: 400 Seventh St. N.W.
                                                                                                                                                                                                                                                                                                                                                                                                                               20004
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Doyle, Darrell J.
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                                      638-6666
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RESULT 7 US-08-655-640-4

Sequence 4, Application US/08655640 Patent No. 5948613 GENERAL INFORMATION:

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TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-932-190-2
   B
                                                                                                                                           US-08-655-640-2
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                                                                   Query Match
Best Local Similarity
Matches 47; Conserv
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/08/65
FILING DATE: 30-MAY-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/992,
APPLICATION NUMBER: 07/992,
APPLICATION UNBER: 17, 1
ATTORNEY/AGENT INFORMATION:
NAME: SCOTT, WATSON T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 705 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
APPLICANT: Teng, Christina
APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: FLOPPY DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                          MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (202) 861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                        NAME: SCOTT, WATSON T.
REGISTRATION NUMBER: 26,581
REFERENCE/DOCKET NUMBER: WT
                                                                                                                                                                             TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: CUSHMAN, DARBY & CUSHMAN STREET: 1100 NEW YORK AVE. N.W., NINTH FLOOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: WASHINGTON
20 RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA 66
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                                2 RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
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                                                                                                                                                                                          amino acid
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                                                                  97.8%; Score 261; DB 2; ilarity 100.0%; Pred. No. 2e-27; Conservative 0; Mismatches
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ber 17, 1992
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                                                                                                    Length 705;
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Patent No. 563307
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FILING DATE: December 17, 1992
ATTORNEY/AGENT INFORMATION:
NAME: SCOTT, WATSON T.
REGISTRATION NUMBER: 26,581
REFERENCE/DOCKET NUMBER: WTS/568
TELECOMMUNICATION INFORMATION:
TELEPHONE: (202) 861-3000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEFAX: (202) 822-0944
TELEX: 6714627 CUSH
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                         APPLICANT: Lee, Sany ...
APPLICANT: Pieper, Frank
APPLICANT: Rrimpenfort, Paul J.A.
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Method
TITLE OF GROWENCES: 38
                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 30-MAY-CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOCTWARE: PatentIn Release #1.0, Version
CURRENT APPLICATION DATA:
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
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ADDRESSEE: CUSHMAN, DARBY & CUSHMAN
STREET: 1100 NEW YORK AVE. N.W., NII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: protein
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
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APPLICANT: Panella, Timothy J.
TITLE OF INVENTION: HUMAN LACTOFERRIN
NUMBER OF SEQUENCES: 5
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STREET:
San '
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                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
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l Similarity 100.0%; Pred. No.
47; Conservative 0; Mismatch
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                                                                                                California
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    Townsend and Townsend and Crew
One Market Plaza, Steuart Tower,

                                                                                                                                                                                                                                                                                                         Strijker, Rein
Heyneker, Herbert L.
Platenburg, Gerald
                                                                              USA
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Lee, Sang He
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                                                                                                                   Francisco
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. 2e-27;
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                                                                                                                                         Suite 2000
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US-08-461-333-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No. 5/41/2
Patent No. 5/41/2
PATENT NO. 5/41/2
PATENTAL INFORMATION:
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Best Local
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APPLICATION NUMBER: US 07/895,956

FILING DATE: 15-JUN-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/619,131

FILING DATE: 27-NOV-1990

PRIOR APPLICATION NUMBER: US 07/444,745

APPLICATION NUMBER: US 07/444,745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 4:
                SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                 COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: FC-DOS/MS-DOS

OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower, Suite 2000
                                                                                                                                                                                                                                                                                   APPLICANT: Platenburg, Gerald
APPLICANT: Lee, Sang He
APPLICANT: Pieper, Frank
APPLICANT: Fieper, Frank
APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
LENGTH: 711 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                       NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,50 REFERENCE/DOCKET NUMBER: 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   97.8%;
Local Similarity 100.0%;
es 47; Conservation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE:
APPLICATION NUMBER: US/08/461,333
                                                                                                                                                   COUNTRY:
                                                                                                                                                                                         CITY: San Francisco
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Lee, Sang He
Pieper, Frank
                                                                                                                                                                                                                                                                                                                                                                                                        Strijker, Rein
Heyneker, Herbert L.
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01-DEC-1989
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15-JUN-1993
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ER: 16994-003123
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PRIOR APPLICATION DATA:

FILING DATE: CLASSIFICATION

05-JUN-1995

APPLICATION NUMBER:

15-JUN-1993

US 08/077,788

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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 4, Application US/08464167
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APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO: 4:
             APPLICATION NUMBER: US/08/464,167
FILING DATE: 05-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-1993
                                                                                                                                                                                                                                                                                 NUMBER OF SHAPESS:
CORRESPONDENCE ADDRESS:
CONNESSEE: Townsend and Townsend and Crew
ADDRESSEE: Townsend Plaza, Steuart Tower,
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Methods
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE: protein
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mes 47; Conserv
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APPLICATION DATA:
                                                                                                                                                                                                                                                               ET: One Market P
: San Francisco
E: California
                                                                                                                                                                                                                             94105
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Lee, Sang He
Pieper, Frank
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Heyneker, Herbert L.
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15-JUN-1992
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Pred. No. 2e-27;
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                                                                                                                                                                                                                                                                                                Suite 2000
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RESULT 11
US-09-158-313-4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Deboer,
APPLICANT: Strijke:
APPLICANT: Heyneke:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
Matches 47; Conserv
                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/158,313
FILING DATE:
CLASSIFICATION DATA:
PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: 08/476,798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 4, Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: 415-543-5043
INFORMATION FOR SEQ ID NO:
                                                FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0 FILING DATE: 27-NOV-1990 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
TITLE OF INVENTION: by Bovine Species and Transgenic Metho
NUMBER OF SEQUENCES: 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 27-NOV-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 01-DEC-1989
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NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 16
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Tower, Suite 2000 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: U
ZIP: 94105
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Conservative C
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Platenburg, G
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                                        US 07/619,131
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US-08-476-798-4
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                                                                                                                    APPLICATION NUMBER: US/08/476,798
FILING DATE: 07-JUN-1995
CLASSIFICATION: 800
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-JUN-193
PRIOR APPLICATION NUMBER: US 07/895,956
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/619,131
EILING DATE: 27-NOV-1990
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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CURRENT APPLICATION DATA:
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ADDRESSEE: Townsend and Townsend and Crew
STREET: One Market Plaza, Steuart Tower, Suite 2000
                                              APPLICATION NUMBER: US 0 FILING DATE: 01-DEC-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                      PRIOR APPLICATION DATA:
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ITILE OF INVENTION: by Bovine Species and Transgenic Methods
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           NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
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47; Conserv
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Heyneker, Herbert L.
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er, Frank
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                                                                                       US 07/444,745
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Pred. No.
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RESULT 13
US-08-464~182A-5
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                            US-08-464-182A-5
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Patent No. 5849885
GENERAL INFORMATION:
APPLICANT: Nuljens, Jan H.
APPLICANT: Van Veen, Harry H.
TITLE OF INVENTION: Isolation of Lactoferrin from Milk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
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Best Local S
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                                                                                                                                                                                                              TELEFAX: (650) 326-24 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP
STREET: Two Embarcadero Center, 8th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                            NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 016994-004920US
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 530
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 05-JUN-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/406,271
FILING DATE: 09-MAR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SOPTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear MOLECULE TYPE: protein
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                                                                                                                                                                                                                                                                                                                           FILING DATE: 16-FEB-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES:
                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                               FEATURE:
                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE:
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CITY: San Francisco
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                                                           NAME/KEY: Peptide LOCATION: 1..53
                                                                                                                    TYPE: aman street strandEdNess: not rete monor.ogy: not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
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                                             OTHER INFORMATION:
                                                                                                                                                                                                                                              relephone:
                                                                                                                                                                            ENGTH:
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47; Conserv
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415-543-5043
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                                                                                                                                                                                                                               (650)
                                                                                                                                                                                                              (650) 326-2400
(650) 326-2422
R SEQ ID NO: 5:
                                                                                                             peptide
                                                                                                                                             not relevant
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97.4%; Score 260;
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                                             /note= "HLF cDNA Rado"
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 DB
2
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Length 53;
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Query Match

Best Local Similarity 95.4 Matches 46; Conservative

95.8%;

<u>,</u>

Pred. No. 1.5e-28; 1; Mismatches 1;

Indels

0

Gaps

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1 GRRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48

GRRRSVOWCAVSNPEATKCFOWQRNMRKVRGPPVSCLKRDSPIQCIQA 48

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                                                                                                   RESULT 15
US-09-017-043A-3
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US-08-406-271-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REFERENCE/DOCKET NUMBER: 0169
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 326-2400
TELEPHONE: (415) 326-2422
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 53 aming acids
     Sequence 3, Application US/09017043A Patent No. 6333311
GENERAL INFORMATION:
APPLICANT: Nuijens, Jan
APPLICANT: van Berkel, Patrick
                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PATENCE NO. JACATION:
PATENCE TO THE PARTICAL PROPERTY OF THE PAPELICANT: Nuyens, Jan H.

APPLICANT: Van Veen, Harry H.

TITLE OF INVENTION: Isolation of Lactoferrin from Milk

TITLE OF SEQUENCES: 28

CORRESPONDENCE ADDRESS:

ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP

ADDRESSEE: TOWNSEND and TOWNSEND and CREW LLP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 5, App. -
Sequence 5, App. -
Sequence 5, App. -
No. 591991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/406,271
FILING DATE: 09-MAR-1995
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/198,321
FILING DATE: 16-FEB-1994
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                               NAME/KEY: Peptide LOCATION: 1..53 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STREET: One Market I
STREET: Floor
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS: not
TOPOLOGY: not re
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ZIP: 94105
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Nuijens, Jan
van Berkel, Patrick
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                                                                                                                                                                                                                                                                                                                                                                                                                                             not relevant
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                                                                                                                                                                                                                                                                    97.4%;
                                                                                                                                                                                                                                                                                                                                               /note= "HLF cDNA Rado"
                                                                                                                                                                                                                                                Score 260; DB Pred. No. 1.5e.
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              016994-004910
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                                                                                                                                                                                                                                                                    DB 2;
1.5e-28;
                                                                                                                                                                                                                                                                                    Length 53;
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US-09-017-043A-3
                                                                      Matches
                                                                    Query Match 95.1%;
Best Local Similarity 95.7%;
Matches 45; Conservative
                                                                                                                                                                                                                               TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
LENGTH: 52 amino acids
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/036,859
FILING DATE: 03-FEB-1997
ATTORNEY/AGENT INFORMATION:
NAME: Apple, Randolph T.
REGISTRATION NUMBER: 36,429
REGISTRATION NUMBER: 36,429
                                                                                                                                                           MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 576-0200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/0:
FILING DATE: 02-FEB-1998
CLASSIFICATION: 514
                                                                                                                                                                                               STRANDEDNESS
                                                                                                                                                                                                                                                                                                     TELEPHONE:
                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                TYPE: amino acid
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RRRSVQWCAVSNPEATKCFQWQRNMRKVRGPPVSCLKRDSPIQCIQA 49
                        RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
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Two Embarcadero
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Center, Eighth Floor
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                                                                  Score 254; DB 4;
Pred. No. 9.5e-28;
1; Mismatches 1
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Search completed: September Job time : 31.04 secs ۲, 2004, 00:18:40 B Ś

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Database
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OM protein - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
                                                Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                     1297172 segs, 314612898 residues
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267
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Published_Applications_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Copyright
                                                                                                                                                     / Cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US08_NEW_PUB.pep:*
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/ Cgn2_6/ptodata/2/pubpaa/US09_NEW_PUB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US108_PUBCOMB.pep:*
/ Cgn2_6/ptodata/2/pubpaa/US108_NEW_PUB.pep:*
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137.988 Million cell updates/sec
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SUMMARIES
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129	142	142	254	254	258	261	261	261	261	261	261	261	261	261	Score	
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708	25	25	711	709	333	711	711	711	711	711	694	690	690	690	Query Match Length	
14	10	10	16	14	16	15	15	15	14	14	13	16	14	14	DB	
US-10-169-297-8	US-09-798-026B-24	US-09-798-869-20	US-10-408-765A-2000	US-10-170-221-2	US-10-408-765A-241	US-10-440-464-69	US-10-341-434-218	US-10-341-434-202	US-10-170-221-4	US-10-169-297-9	US-10-023-096-2	US-10-639-835-4	US-10-077-381-4	US-10-076-816-4	ID	
Sequence 8, Appli		Sequence 20, Appl		2, A	241	Sequence 69, Appl	218	Sequence 202, App	Sequence 4, Appli	Sequence 9, Appli	e 2 '		4	Sequence 4, Appli	Description	

RESULT 2

45	44	43	42	41	40	39	38	37	36	35	34	33	32	3	30	29	28	27	26	25	24	23	22	21	20	19	18	17	٥
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-09-847-208-	-10-181-937	-10-133-642-	-09-798-026B	-09-798-869-	-10-145-651-	-09-798-026B	-09-798-869-	-09-798-026B-	-09-798-869-2	-09-798-026B-	-09-798-869-2	-10-316-253-2	-10-316-253-27	205-331-55	-09-866-050A-	-09-753-389	-09-753-385	-10-231-49	-10-378-09	-10-384-060-	-10-383-201-	-10-383-201-1	-09-935-642-	-10-231-494-	-10-378-0	-10-384-060-	S-10-144-649A-	09-854-13	-09-130-913-20
equence 102	equence 3,	equence 3;	equence 6,	equence 6,	equence 1,	equence 2,	equence 2,	equence 27,	equence 23,	equence 26,	equence 22,	equence 273	equence 279	quence 55	equence 69:	equence 4,	equence 2,	equence 2,	equence 2,	equence 2,	equence 14	equence 10	equence 6,	equence 3,	equence 3,	uence 3,	equence 203	quence 203,	ednerice zoa/

ALIGNMENTS

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APPLICANT: Handy Ning
APPLICANT: Handy Ning
APPLICANT: Hagle, Frank E.
TITLE OF INCHNITON: Feed Additive Compositions and Methods
FILE REFERENCE: 50665-8021.US00
CURRENT APPLICATION NUMBER: US/10/076,816
CURRENT FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 60/269,188
PRIOR APPLICATION NUMBER: US 60/269,188
PRIOR APPLICATION NUMBER: US 60/269,188
PRIOR APPLICATION NUMBER: US 60/264,232
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR PILING DATE: 2001-02-06
PRIOR PILING DATE: 2001-05-02
NUMBER OF SEQ ID NOS: 60
SOFTMARE: FastSEQ for Windows Version 4.0
SEQ ID NO 4
LENGTH: 640
     В
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                                                                                                                                                                                                                     ; LENGTH: 690
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-076-816-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-076-816-4
                                                                                                    Query Match 97.8%; Score 261; DB 14; Best Local Similarity 100.0%; Pred. No. 1e-25; Matches 47; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 4, Application US/10076816
Publication No. US20030056244A1
GENERAL INFORMATION:
  w
                                  2 RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 49
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US-10-077-381-4

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APPLICANT: Rodriguez, Raymond
APPLICANT: Redriguez, Raymond
APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins in
TITLE OF INVENTION: Transgenic Plants
FILLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022.US00
CURRENT APPLICATION NUMBER: US/10/077,381
CURRENT FILING DATE: 2002-02-14
PRIOR APPLICATION NUMBER: US 09/867,232
PRIOR APPLICATION NUMBER: US 09/847,232
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2001-05-02
PRIOR FILING DATE: 2001-05-02
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                                                                                                                                       ; LENGTH: 690
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-639-835-4
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PRIOR FILING DATE: 2001-02-14
PRIOR APPLICATION NUMBER: US 90/847,232
PRIOR FILING DATE: 2001-05-02
PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR APPLICATION NUMBER: US 60/201,182
PRIOR APPLICATION NUMBER: US 60/201,182
PRIOR FILING DATE: 2000-05-02
PRIOR FILING DATE: 2000-05-02
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Publication No. US20030074700A1
GENERAL INFORMATION:
                                 Query Match
Best Local Similarity 100.
Matches 47; Conservative
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                                                                                                                                                                                                                                 SEQ ID NO 4
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Publication No. US20040111766A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: US 60/266,929
PRIOR FILING DATE: 2001-02-06
PRIOR APPLICATION NUMBER: US 60/201,182
PRIOR FILING DATE: 2000-05-02
                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT FILING DATE: 2003-08-12
PRIOR APPLICATION NUMBER: US 10/077,381
PRIOR FILING DATE: 2002-02-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Rodriguez, Raymond
APPLICANT: Hagie, Frank E.
TITLE OF INVENTION: Expression of Human Milk Proteins
TITLE OF INVENTION: Transgenic Plants
FILE REFERENCE: 50665-8022.US01
CURRENT APPLICATION NUMBER: US/10/639,835
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 33
SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Huang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ENGTH: 690
    2 RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
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100.0%;
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Pred. No.
                                                                        Score 261; DB 16;
Pred. No. 1e-25;
                                                     Mismatches
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                                                                                              DB 16;
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TYPE: amino a
; TOPOLOGY: lin
; MOLECULE TYPE:
US-10-023-096-2
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US-10-023-096-2
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                                                                                                                                                                                            US-10-169-297-9
                                                                                                                                  Sequence 9, Application US/10169297 Publication No. US20030171276A1 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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INFORMATION FOR SEQ ID NO:
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                                 APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masashi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies for Chronic
TITLE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
FILING DATE: 30-SEPT-
APPLICATION NUMBER: U
CURRENT APPLICATION NUMBER: US/10/169,297
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LENGTH: 694 amino acids.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 05-MAY-1994
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ITLE OF INVENTION: Cloning, EXITLE OF INVENTION: Lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/10/023,096 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME: Player, William
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47; Conserv
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400 Seventh St. N.W.
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Gollnick, Paul D.
Doyle, Darrell J.
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                                                                                                                                                                                                                                                                                                                                                 97.8%; Score 261; DB 13; 100.0%; Pred. No. 1e-25;
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; SEQ ID NO 9
; LENGTH: 711
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PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: JP 11/374087
PRIOR FILING DATE: 1999-12-28
NUMBER OF SEQ ID NOS: 50
                      TELEFAX: 415-543-5043 INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1
CURRENT APPLICATION NUMBER: US/10/170,221
APPLICATION NUMBER: US/10/170,221
FILING DATE: 11-Jun-2002
CLASSIFICATION: «Unknown»
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend and Crew
ADDRESSEE: Townsend and Tower, Suite 2000
                                                                                                                                                   APPLICATION NUMBER: US 07/444,745 FILING DATE: 01-DEC-1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: US/08/476,798
FILING DATE: 07-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
by Bovine Species and Transgenic Methods
SEQUENCE
                                                          TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
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                                                                                                                                                                                                          APPLICATION NUMBER: US 08/077,788
FILING DATE: 15-UN-1993
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-UN-1992
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
                                                                                              NAME: Liebescheutz, Joe O.
REGISTRATION NUMBER: 37,505
REFERENCE/DOCKET NUMBER: 16994-003125
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Heyneker, Herbert L.
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US-10-341-434-218
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    Query Match
Best Local Similarity 100.0
                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 218, Applic Publication No. US20 GENERAL INFORMATION:
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APPLICANT: OriGene Technologies
TITLE OF INVENTION: Differentially Regulated Pro
FILE REFERENCE: 9U 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
PRIOR APPLICATION NUMBER: US 60/348,164
PRIOR FILING DATE: 2002-01-15
PRIOR FILING DATE: 2002-01-15
PRIOR FILING DATE: 2002-01-15
PRIOR FILING DATE: 2002-01-15
NUMBER OF SEQ ID NOS: 238
NUMBER OF SEQ ID NOS: 238
                                                                                              ; ORGANISM: Homo sapiens US-10-341-434-218
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Oridene Technologies
TITLE OF INVENTION: Differentially Regulated Prostate Cancer |
FILE REFERENCE: 9U 204 205 R1
CURRENT APPLICATION NUMBER: US/10/341,434
CURRENT FILING DATE: 2003-07-18
PRIOR APPLICATION NUMBER: US 60/348,164
PRIOR FILING DATE: 2002-01-15
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SEQ ID NO 202
SEGUE SENGTH: 711
TYPE: PRT
ORGANISM: Homo sapiens
                                                                                                                                           SOFTWARE: PatentIn version 3.1
SEQ ID NO 218
LENGTH: 711
TYPE: PRT
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Best Local Similarity 100.0%;
Matches 47; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 RRRSVQWCAVSQPEATKCFQWQRNWRKVRGPPVSCIKRDSPIQCIQA
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o. US20030215835A1
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                          100.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            97.8%; Score 261; DB 14; 100.0%; Pred. No. 1.1e-25;
                     97.8%; Score 261; DB 15; 100.0%; Pred. No. 1.1e-25;
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Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prostate Cancer Genes
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  Indels
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RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA

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; SEQ ID NO 241
; LENGTH: 333
; TYPE: PRT
; ORGANISM: Homo sapiens
US-10-408-765A-241
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Query Match
Best Local S
Matches 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 241,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: DEPRIMO,
APPLICANT: O'FARREL
APPLICANT: MORIMOTO
APPLICANT: SMOLICH,
APPLICANT: MANNING,
APPLICANT: WALTER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
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Publication No.
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Best Local
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                                                                                                                                                                                 APPLICANT: Zhang, Bing
APPLICANT: Gibson, Bradford W.
APPLICANT: Taylor, Steven W.
APPLICANT: Gibson, Gary M.
APPLICANT: Gibson, Gary M.
APPLICANT: WATNOCK, Dale E.
TITLE OF INVENTION: TARGETS FOR THERAPEUTIC INTERVENTION
TITLE OF INVENTION: IDENTIFIED IN THE MITOCHONDRIAL PROTEOME
FILE REFERENCE: 660088.465
CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT FILLING DATE: 2003-04-04
NUMBER OF SEQ ID NOS: 3077
SOFTWARE: PASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ghosh, Soumitra APPLICANT: Fahy, Boin D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/380,872
PRIOR FILING DATE: 2002-05-17
PRIOR APPLICATION NUMBER: 60/448,922
PRIOR FILING DATE: 2003-02-24
PRIOR APPLICATION NUMBER: 60/448,874
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 2003-02-24
PRIOR FILING DATE: 1003-02-24
PRIOR FILING DATE: 1003-02-24
PRIOR FILING DATE: 1003-02-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: NOVEL BIOMARKERS OF TYROSINE KINASE INHIBITOR EXPOSURE TITLE OF INVENTION: AND ACTIVITY IN MANWALS FILE REFERENCE: 038602/1592
CURRENT APPLICATION NUMBER: US/10/440,464
CURRENT FILING DATE: 2003-05-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
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  Similarity 97.1
46; Conservative
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MORIMOTO, ALYSSA
SMOLICH, BEVERLY
MANNING, WILLIAM
WALTER, SARAH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/10408765A
o. US20040101874A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SAMUEL
                   96.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97.8%; Score 261; DB 15; 100.0%; Pred. No. 1.1e-25; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     JULIE
Score 258; DB 16;
Pred. No. 1.2e-25;
1; Mismatches 0;
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                                     Length 333;
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Indels
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Gaps
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; LENGTH: 709 amino acids; TYPE: amino acid TOPOLOGY: linear; MOLECULE TYPE: protein SEQUENCE DESCRIPTION: SEQ ID NO: 2: 170-221-2
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US-10-170-221-2
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                                                                                       Matches
                                                                                                         Query Match
Best Local Similarity
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Publication No. US20030192068A1
                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 16994-003125
TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-543-9600
TELEFAX: 415-543-9633
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
OPERATING DATA:
APPLICATION UNMBER: US/10/170,221
FILING DATE: 11-UN-2002
CLASSIFICATION: -CUnknown>
PRIOR APPLICATION UNMBER: US/08/476,798
FILING DATE: 07-UN-1995
APPLICATION NUMBER: US/08/476,798
FILING DATE: 07-UN-1995
APPLICATION NUMBER: US/08/476,798
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 15-JUN-1993
APPLICATION NUMBER: US 07/895,956
FILING DATE: 15-JUN-1992
APPLICATION NUMBER: US 07/619,131
FILING DATE: 27-NOV-1990
APPLICATION NUMBER: US 07/444,745
FILING DATE: 01-DEC-1989
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Deboer, Herman A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Krimpenfort, Paul J.A.
TITLE OF INVENTION: Production of Recombinant Polypeptides
by Bovine Species and Transgenic Methods
21 RRRSVQWCAVSQPEATKCFQWQRNMRKVLGPPVSCIKRDSPIQCIQA 67
                                                                                       46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION
                                    RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Liebescheutz, Joe O. REGISTRATION NUMBER: 37,505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE: Townsend and Townsend and Crew STREET: One Market Plaza, Steuart Tower, Suite 2000 CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RRRSVOWCAVSOPEATKCFOWORNMRKVRGPPVSCIKRDSPIQCIOA 48
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                                                                                       Conservative
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Heyneker, Herbert L.
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Lee, Sang He
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                                                                                                         95.1%;
97.9%;
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                                                                                     Score 254; DB 14;
Pred. No. 8.8e-25;
0; Mismatches 1;
                                                                                                                              Length
                                                                                       Indels
                                                                                       0
                                                                                         Gaps
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US-10-408-765A-2000

Sequence 2000, Application US/10408765A Publication No. US20040101874A1

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FILE REFERENCE: A34049-PCT-USA-A
CURRENT APPLICATION NUMBER: US/9/798,869
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: PCT/GB99/02851
PRIOR FILING DATE: 1999-08-31
PRIOR APPLICATION NUMBER: GB9818938.4
PRIOR FILING DATE: 1998-08-28
                                                                     RESULT 14
US-09-798-026B-24
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US-09-798-869-20
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                                                                                                                                                                                                                                                                                                                                                        ; TYPE: PRT
; ORGANISM: Homo Sapiens
US-09-798-869-20
Sequence 24, Application US/09798026B Publication No. US20030148936A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: JOHN SIGURD SVENDSEN
APPLICANT: (YSTEIN REKDAL
APPLICANT: BALDUR SVEINBJ (RNSSC
APPLICANT: LARS VORLAND
                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 25; Conserv
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Publication No. US20030022821A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/10/408,765A
CURRENT FILING DATE: 2003-04-04
NUMBER OF SEQ ID NOS: 3077
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 2000
LENGTH: 711
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APPLICANT: Fahy, Eoin D.
APPLICANT: Zhang, Bing
APPLICANT: Gibson, Bradford I
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nes 45; Conserv
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Taylor, Steven W.
Glenn, Gary M.
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LARS VORLAND
                                                                                                                                                                                                                                                            Conservative
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95.7%;
                                                                                                                                                                                                                                                  53.2%; Score 142; DB 10; 100.0%; Pred. No. 1.5e-11; tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 254; DB 16;
Pred. No. 8.8e-25;
1; Mismatches 1;
                                                                                                                                                                                                                                                                                                      Length 25;
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Search completed:
Job time : 110.44
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Hepatitis
FILE REFERENCE: 3435.1000-000
CURRENT APPLICATION NUMBER: US/10/169,297
CURRENT FILING DATE: 2002-10-31
PRIOR APPLICATION NUMBER: PCT/JP00/09393
PRIOR FILING DATE: 2000-12-28
PRIOR APPLICATION NUMBER: JP 11/374087
PRIOR FILING DATE: 1999-12-28
NUMBER OF TEXT STATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-798-026B-24
                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 43.2
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TITLE OF INVENTION: Cyctoxic Peptides Modified by Bulky or Lipophilic Moleties
FILE REFERENCE: 40745-2
CURRENT APPLICATION NUMBER: US/09/798,026B
CURRENT FILING DATE: 2001-02-27
PRIOR APPLICATION NUMBER: GB 9818938.4
PRIOR APPLICATION NUMBER: GB 9818938.4
SOFTWARE: 58Q ID MOS: 31
SOFTWARE: PATENTIN VERSION 3.1
SEQ ID MO 24
LENGTH: 25
TWORE: 35
TENGTH: 25
THE TRANSPORT OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQ ID NOS: 50
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 8
LENGTH: 708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Tohdoh, Naoki
APPLICANT: Murata, Masashi
APPLICANT: Enjoji, Takashi
TITLE OF INVENTION: Preventives and Remedies
TITLE OF INVENTION: Hepatitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 8, Application US/10169297 Publication No. US20030171276A1
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Local Similarity 100.0%;
les 25; Conservative (
                                                                                                                                          22 RKNVRWCTISOPEWFKCRRWOWRMKKLGAPSITCVRRAFALECI
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secs
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                                                                                                                                                                                                                                                                                                13;
                                   2004, 00:49:22
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Pred. No. 2.7e-08;
-3; Mismatches 12;
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GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd. Stein search, using sw model September 1, 2004, 00:03:45; Search time 27.84 Seconds (without alignments) 165.847 Million cell updates/sec US-09-508-095-19	30 53.5 20.0 3871 2 T22812 31 53 19.9 170 2 AB2715 32 53 19.9 370 1 LARBA 33 53 19.9 370 1 LARBA 34 53 19.9 373 1 KMECTD 35 53 19.9 373 2 CB5906 chorismate mutase chorismate mutase 36 53 19.9 373 2 CB5906 chorismate mutase 37 52.5 19.7 388 2 T29694 38 52.5 19.7 388 2 T29694 40 51.5 19.3 681 1 A36500 41 51.5 19.3 811 2 T40275 chorestric precur 42 51.5 19.3 811 2 T40275 chorestrichy
283366 seqs, 96191526 residues	ALIGNMENTS
SID.	RESULT 1
ength: 0 ength: 2000000000	IFHUL lactotransferrin precursor [validated] - human
Minimum Match 0% Maximum Match 100% Listing first 45 summaries	C.Species: Howo sapiens (man) C.Species: Homo sapiens (man) C.Date: 31-Mar-1992 #sequence revision 21-Nov-1997 #text change 08-Dec-2000 C.Accession: G01394; S11228; Ā45401; S10324; S15853; S20841; S07160; A61169; A31000; S74
PIR 78:* 1: pir1:* 2: pir2:* 3: pir3:* 4: pir3:*	submitted to the EMBL Data Library, March 1994 A;Reference number: G06820 A;Accession: G01394 A;Status: preliminary; translated from GB/EMBL/DDBJ
is the number of results predicted by chance to have a ter than or equal to the score of the result being printed, ived by analysis of the total score distribution.	A. Cross-references: EMBL:U07643; NID:g467236; PIDN:AAB60324.1; PID:g467237 R;Rey, M.W.; Woloshuk, S.L.; deBoer, H.A.; Pieper, F.R. Nucleic Acids Res. 18, 5288, 1990
SUMMARIES	A;Litte: Complete nucleotide sequence of human mammary gland lactoferrin. A;Reference number: S11228; MUID:90384839; PMID:2402455
Query Match Length DB ID Description	A. Accession: S11228 A. Molecule type: mrx, A. Residues: 1-148,'T',150-422,'C',424-711 <rey></rey>
8 711 1 TFHUL 7 708 2 JC2323	A;Cross-renerences: EMBL:X33961; NID:g34415; PIDN:CAA37914.1; PID:g34416 R;Teng, C.T.; Liu, Y.; Yang, N.; Walmer, D.; Panella, T. Mol. Endocrinol. 6, 1969-1981, 1992
1 A28438 lactoferrin precu 1 TFBOL lactotransferrin	A;Title: Differential molecular mechanism of the estrogen action that regulates lactofer A;Reference number: A45401; MUID:93125571; PMID:1480183
0 104 2 147228 0 696 1 SO1384 4 698 1 TEHUD	A;Accession: A45401 A;Molecule type: DNA A, Molecule type: DNA
2 703 2 A45543 1 33 2 S52107	A; Cross-red; . E: S52659; NID:g263311; PIDN:AAB24877.1; PID:g263312
1 695 2 S49163	A; Note: Mequence Source: pracette A; Note: Sequence Source: pracette B. Powell M. T. Orden T. P.
706 2 833760 7 64 3 1513561	Nucleic Acids Res. 18, 4013, 1990
7 690 2 T11749	A;Title: Nucleotide sequence of human lactoferrin cDNA. A;Reference number: S10324; MUID:90326549; PMID:2374734
7 738 1 TFHUM 5 705 1 TFCHE	A;Accession: S10324 A;Molecule type: mRNA
0 717 2 S12100 5 311 3 328446	A; Residues: 3-711 < PON>
5 551 2 GR26330	A;CTOSS TELEFENCES: EMBL:X52941; NID:g34411; PIDN:CAA37116.1; PID:g34412 R;Stowell, K.M.; Rado, T.A.; Funk, W.D.; Tweedie, J.W.
373 2	A;Title: Expression of cloned human lactoferrin in baby-hamster kidney cells. A:Reference number: 015853. MITT 01584786. DMTT 2040066
0 262 2 C75554 6 2505 1 XYRTFA	A:Accession: S15853 A:Statis: nucleic acid sequence not shown: not compared with concentual translation
pothetical pothetical	(10 10 10 10 10 10 10 10 10 10 10 10 10
A 422 2 A 44589	3 3 1 1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2

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A; Recession: S07160
A; Accession: S07160
A; Accession: S07160
A; Molecule type: mRNA
A; Residues: 436-487, 'A' 489-711 < RAD>
A; Residues: 436-487, 'A' 489-711 < RAD>
A; Cross-references: EMBL:M18642; NID:g186815; PIDN:AAA86665.1; PID:g386855
A; Cross-references: S1, 3037-3043, 1991
A; Title: Polymorphism and altered methylation of the lactoferrin gene in normal leukocyt A; Reference number: A61169; MUID:g1235214; PMID:1674448
A; Reference number: MSNA
A; Residues: 3-701, 'SWKPYN' < PAN>
A; Residues: 3-701, 'SWKPYN' < PAN>
A; Reference number: NI: Joules, J; Mazurier, J; Schoentgen, F.; Legrand, D.; Spik, G.;
Eur. J. Biochem. 145, 659-666, 1984
A; Title: Human lactotransferrin: amino acid sequence and structural comparisons with oth A; Reference number: A31000; MUID:85076667; PMID:6510420
A; Accession: A31000
A; Accession: A31000
A; Accession: A31000
A; Accession: A31000
A; Roterence number: Barkholt, V.; Norskov, L.
Eur. J. Biochem. 241, 303-309, 1996
A; Title: Lactoferrin: similarity to diamine oxidase and purification by aminohexyl affin A; Reference number: S74119; MUID:97054644; PMID:8989921
A. Accession: S74119; MUID:97054644; PMID:8989921
A. Accession: S74119; MUID:97054644; PMID:8989921
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A;Title: Isolation of lactoferrin cDNA from a human myeloid library and expression A;Reference number: S07160; MUID:88001031; PMID:3477300
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;Superfamily: transferrin; transferrin repeat homology
;Superfamily: transferrin; transferrin repeat homology
C;Keywords: duplication; glycoprotein; iron binding; milk
F;1-19/Domain: signal sequence #status predicted <SIG>
F;1-19/Domain: signal sequence #status experimental <MAT>
F;20-711/Product: lactotransferrin #status experimental <MAT>
F;21-356;Domain: transferrin repeat homology <TRH1>
F;360-699/Domain: transferrin repeat homology <TRH2>
F;360-699/Domain: transferrin repeat homology <TRH2>
F;35,39-56,135-218,177-193,190-201,251-265,503-697,595-609/Disulfide bonds: #status experimental
F;157,498/Binding site: carbohydrate (Asn) (covalent) #status experimental
F;1568-400,378-391,425-706,447-669,479-554,513-527,524-537,647-652/Disulfide bonds: #status experimental
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A;Molecule type: protein
A;Residues: 'G',23-24',R',26-27,'XX',30-32 <HOU>
A;Experimental source: neutrophil granulocytes
A;Molecule type: mRNA
A;Residues: 1-708 <iEF>
C;Superfamily: transferrin; transferr:
C;Keywords: duplication; glycoprotein
F;359-696/Domain: transferrin repeat l
F;252,300,387,495,564/Binding site: c:
                                                                                                                                                                                                              R;Le Provost, F.; Nocart, M.; Guerin, G.; Martin, P. Biochem. Biophys. Res. Commun. 203, 1324-1332, 1994
A;Title: Characterization of the goat lactoferrin cDNA: A;Reference number: JC2323; MUID:94380047; PMID:8093048
A;Accession: JC2323
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Best Local S
Matches 47
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;Date: 20-Feb-1995 #sequence_revision 20-Feb-1995 #text_change 07-May-1999
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                                                                                                             ;Superfamily: transferrin; transferrin repeat homology
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100.0%; P7
       repeat homology <TRH2> site: carbohydrate (Asn)
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Pred. No.
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               (covalent) #status
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C;Accession: A28438; A41205
R;Pentecost, B.T.; Teng, C.T.
J. Biol. Chem. 262, 10134-10139, 1987
A;Title: Lactotransferrin is the major estrogen inducible protein A;Reference number: A92596; MUID:87280033; PMID:3611056
A;Accession: A28438
                                                                                                                                                                                                                                                                                                 N;Alternate names: lactoferrin
C;Species: Bos primigenius taurus (cattle)
C;Date: 31-Mar-1992 #sequence revision 21-Nov-1997
C;Accession: I45919; S14674; S14110; S18517; JT0595
R;Tsang, T.C.; Burns, D.K.; Wang, F.; Pan, Y.
RASEB J. 6, 233, 1991
A;Title: Cloning of a 80-kD advanced glycosylation
A;Reference number: I45919
A;Accession: I45919
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
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J. Biol. Chem. 266, 21880-21885, 1991
J. Biol. Chem. 266, 2180-21885, 1991
A;Tille: Characterization of estrogen-responsive mouse lactoferrin promoter.
A;Reference number: A41205; MJID:92042099; PMID:1939212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: mRNA
A; Residues: 3-707 < PEN>
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A;Molecule type: mRNA
A;Residues: 1-144,'V',146-163,'PP',166-339,'A',341-438,'Y',440-513,'R',515-708 <FII>A;Residues: 1-144,'V',146-163,'PP',166-339,'A',341-438,'Y',440-513,'R',515-708 <FII>A;Cross-references: EMBL:X57084; NID:g505; PIDN:CAA40366.1; PID:g506
A;Pierce, A.; Colavizza, D.; Benaissa, M.; Maes, P.; Tartar, A.; Montreuil, J.; Spik
                                                                                                   submitted to the EMBL Data Library, A;Reference number: S14674
A;Accession: S14674
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A; Residues: 1-15 <LIU>
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A; Residues: 1-708 < TSA>
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27; Conserv
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                                                                                                                                                                                                   GB:L08604; NID:g163269; PIDN:AAA30609.1;
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Pred. No. 1.2e-12;
4; Mismatches 8;
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Pred. No. 2.9e-12;
6; Mismatches 11
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                                                                                                                                                        November 1990
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JT0595; S13097; S18518; S13881;
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A;Molecule type: protein
A;Molecule type: protein
A;Residues: 20-25;302-308;359-366,'X',368-376,'X',378 <SHI>
C;Superfamily: transferrin; transferrin repeat homology
C;Reywords: duplication; glycoprotein; iron; iron binding; metalloprotein; milk
F;1-19/Domain: signal sequence #status predicted <SIG>
F;20-708/product: lactotransferrin #status experimental <MAT>
F;20-355/Domain: transferrin repeat homology <TRH1>
F;36-60/Region: antimicrobial
F;35-60/Region: artimicrobial
F;35-696/Domain: transferrin repeat homology <TRH2>
F;38-64,134-217,179-200,189-202,250-264,367-399,377-390,424-703,444-666,476-551,
F;38-55/Disulfide bonds: #status predicted
F;38-55/Disulfide bonds: #status predicted
                                                    F;79,111,211,272/Binding site: iron (Asp, Tyr, Tyr, His) #status F;140/Binding site: carbonate (Arg) #status experimental F;252,300,387,495,564/Binding site: iron (Asp) #yr, Tyr, His) #status F;414,452,545,614/Binding site: iron (Asp, Tyr, Tyr, His) #status F;482/Binding site: carbonate (Arg) #status experimental
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A;Residues: 36-60 <BEL>
R;Shimazaki, K.; Tanaka, T.; Kon, H.; Oota, K.; Kawaguchi, A.; Maki, Y.; Sato, T.
J. Dairy Sci. 76, 946-955, 1993
A;Title: Separation and characterization of the C-terminal half molecule of bovine A;Reference number: A56659; MUID:93253156; PMID:8486845
A;Accession: A56659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Molecule type: mRNA
A;Residues: 28-38,'P',40-86,'C',88-708 <ME3>
A;Cross-references: EMBL:X54801
R;Rejman, J.J.; Hegarty, H.M.; Hurley, W.L.
Comp. Blochem. Physiol. B 93, 929-934, 1989
A;Title: Purification and characterization of bovine lactoferrin
A;Reference number: PL0148; MUID:90031466; PMID:2805645
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Molecule type: protein
A;Residues: 20-27,'X','29-37,'X',39-54,'X', 156-59 <REJ>
R;Bellamy, W.; Takase, M.; Yamauchi, K.; Wakabayashi, H.; Kawase,
Biochim. Biophys. Acta 1121, 130-136, 1992
A;Title: Identification of the bactericidal domain of lactoferrin.
A;Reference number: S21756; MUID:92287941; PMID:1599934
A;Accession: S21756
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A;Residues: 1-65, Pg', 68-296, S', 298-339, A', 341-708 <GOO>
A;Cross-references: GB:M63502
A;Note: the authors translated the codon CCG for residue 66
R;Mead, P.E.; Tweedie, J.W.
Nucleic Acids Res. 18, 7167, 1990
A;Title: cDNA and protein sequence of bovine lactoferrin.
A;Reference number: S13097; MUID:91088328; PMID:2263492
A;Accession: S13097
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A;Title: Bovine lactoferrin mRNA: sequence, analysis, and expression
A;Reference number: JT0595; MUID:92028986; PMID:1718281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: PL0148
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A;Residues: 20-47;59-66;132-139;256-277;278,305-332;343-351;361-363;586,587-589;598-619
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A;Residues: 28-33,'DS',36-38,'P',40-708 <MEA>
A;Cross-references: EMBL:X54801
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Accession: S18518
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;Residues: 20-35
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/Title: Molecular cloning and sequence analysis of bovine lactotransferrin Reference number: S14110; MUID:91160550; PMID:2001696
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C; Superfamily: transcer. C; Keywords: duplication;
                                              A;Molecule type: protein
A;Residues: 1-8,'X',10-18,'XE' <CHU>
C;Superfamily: transferrin; transfer
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A;Note: the authors suggest transferrin from gastric mucosa may act in die R;Chung, M.C.M.; Chan, S.L.; Shimizu, S. Int. J. Biochem. 23, 609-616, 1991
A;Title: Purification of transferrins and lactoferrin using DEAE Affi-Gel A;Reference number: A61573; MUID:91293379; PMID:2065820
                                                                                                                                                                                                               k; Baldwin, G.S.; Bacic, T.; Chandler, R.; Grego, B.; Pedersen, J.; Simpson, R.J.; Toh, Comp. Biochem. Physiol. B 95, 261-268, 1990
A;Title: Isolation of transferrin from porcine gastric mucosa: comparison with porcine A;Reference number: A60520; MUID:90227903; PMID:2328566
A;Accession: A60520
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        transferrin - pig
C:Species: Sus scrofa domestica (domestic pig)
C:Species: Sus scrofa domestica (domestic pig)
C:Date: 10-Sep-1999 #sequence_revision 10-Sep-1999 #text_change 11-May-2000
C:Accession: S01384; A60520; A61573
R:Baldwin, G.S.; Weinstock, J.
R;Baldwin, G.S.; Weinstock, J.
                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:X12386; NID:g2126; PIDN:CAA30943.1; PID:g833800
A;Note: 308-Arg was also found
R;Baldwin, G.S.; Bacic, T.; Chandler, R.; Grego, B.; Pedersen, J.; Simps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nucleic Acids Res. 16, 8720, 1988
A;Title: Nucleotide sequence of porcine liver transferrin.
A;Reference number: S01384, MUID:88335629; PMID:3419934
A;Accession: S01384
A; Accession: A61573
                                                                                                                                              A; Experimental source: gastric mucosa
                                                                                                                                                                       A;Molecule type: protein
A;Residues: 1-8,'X',10-11,'X',13-15 <BA2>
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A;Residues: 1-704 <ROU>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C; Accession: I47228
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Pred. No. 6.5e-09;
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glycoprotein;

transferrin repeat homology

Tron

transport; plasma

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A;Molecule type: mRNA
A;Residues: 422-690, 'G', 692-698 <UZA>
A;Coss=references: EMBL:M12525, NID:g339468; PIDN:AAA61142.1; PID:g339469
A;Coss=references: EMBL:M12525, NID:g339468; PIDN:AAA61142.1; PID:g339469
A;Coss=reference: EMBL:M12525, NID:g339468; PID:G4564, 1991
A;Contents: annotation; disulfide bonds
R;Hershberger, C.L.; Larson, J.L.; Arnold, B.; Rosteck, P.R.
Ann. N. Y. Acad. Sci. 646, 140-154, 1991
A;Cottle: A cloned gene for human transferrin.
A;Cittle: A cloned gene for human transferrin.
                                     A;Reference number: I51959; MUID: 92231399; PMID:1809186
A;Accession: I51959
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R;UZah, G.; Frain, M.; Park, I.; Besmond, C.; Maessen, G.; Trepat, J.S.; Zakin, M.M.;
Biochem. Biophys. Res. Commun. 119, 273-281, 1984
A;Title: Molecular cloning and sequence analysis of cDNA for human transferrin.
A;Reference number: A32739; MUID:84153910; PMID:6322780
A;Accession: A32739
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()Species: Homo sapiens (man)
()Date: 15-Oct-1982 #sequence_revision 30-Sep-1993 #text_change 08-Dec-2000
()Accession: A20981; A92417; A94044; A29090; A32739; I51959; I63133; I54011; I68160; C;Accession: A20981; A92417; A94044; A29090; A32739; I51959; I63133; I54011; I68160; R;Yang, F.; Lum, J.B.; McGill, J.R.; Moore, C.M.; Naylor, S.L.; van Bragt, P.H.; Bald Proc. Natl. Acad. Sci. U.S.A. 81, 2752-2756, 1984
A;Title: Human transferrin: cDNA characterization and chromosomal localization.
A;Reference number: A20981; MUID:84194084; PMID:6585826
A;Contents: variant C
A; Status: translated from GB/EMBL/DDBJ
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A;Residues: 20-263,'E',265-328,'N',330-379,'SD',382-435,'D',437-557,'T',559-560,'P',562-A;Note: the sequence shown is the predominant electrophoretic genetic variant (C or TfC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Park, I.; Schaeffer, E.; Sidoli, A.; Baralle, F.E.; Cohen, G.N.; Zakin, M.M. Proc. Natl. Acad. Sci. U.S.A. 82, 3149-3153, 1985 A;Title: Organization of the human transferrin gene: direct evidence that it originated A;Reference number: A94044; MUID:85216459; PMID:3858812
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A; Residues: 1-72;291-300 < ADR>
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A;Reference number: A29090; MUID:87192006; PMID:3106157
A;Accession: A29090
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A; Residues: 1-698 < YA
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43.8%; Fred. No. 2.5e-07;
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lactoferrin precursor - pig
C;Species: Sus scrota domestica (domestic pig)
C;Date: 1994 #sequence revision 17-Feb-1994 #text_change 04-Mar-2000
C;Accession: A45543; S24173
C;Accession: A45543; S24173
UR. Tend. C.T.: Beattie. C.W.
A; Title: Nucleotide and primary amino acid sequence of porcine lactoferrin A; Reference number: S24173; MUID:92379101; PMID:1511016
                                                                                A;Note: sequence extracted from NCBI bac
R;Lydon, J.P.; O'Malley, B.R.; Saucedo,
Biochim. Biophys. Acta 1132, 97-99, 1992
                                                                                                                                                                                                                                                                                                                                                                                A; Title: Cloning and sequencing of the porcine lactoferrin A; Reference number: A45543; MUID:92367939; PMID:1503259
                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Alexander, L.J.; Levine, W.B.; Teng, C.T.; Beattie, C.W. Anim. Genet. 23, 251-256, 1992
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F;20-350/Domain: transferrin repeat homology <TRH1>
F;356-688/Domain: transferrin repeat homology <TRH2>
F;356-688/Domain: transferrin repeat homology <TRH2>
F;356-688/Domain: transferrin repeat homology <TRH2>
F;28-67,38-58,137-213,156-350,177-193,180-196,190-198,246-260,358-615,364-396,374-387,42
F;432,630/Binding site: carbohydrate (Asn) (covalent) #status experimental
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A;Residues: 564-698 <RE4>
A;Cross-references: GB:M17614; NID:g339483; PIDN:AAA61148.1;
C;Comment: Each of the two repetitive domains binds a ferric
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A;Cross-references: GB.M26641; NID:g339988; PIDN:AAA61233.1; PID:g339989
A;Cross-references: GB.M26641; NID:g339988; PIDN:AAA61233.1; PID:g339989
R;Schaeffer, E.; Lucero, M.A.; Jeltsch, J.M.; Py, M.C.; Levin, M.J.; Chambon, P.; Cohen, Gene 56, 109-116, 1987
Gene 56, 109-116, 1987
A;Title: Complete structure of the human transferrin gene. Comparison with analogous chi.
A;Reference number: I54011; MUID:88056305; PMID:3678832
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A;Cross-references: GB:S95936; NID:9248647; PIDN:AAB22049.1; PID:9248648
R;Duguid, J.R.; Bohmont, C.W.; Liu, N.G.; Tourtellotte, W.W.
R;Duguid, J.R.; Bohmont, Sci. U.S.A. 86, 7260-7264, 1989
Proc. Natl. Acad. Sci. U.S.A. 86, 7260-7264, 1989
A;Title: Changes in brain gene expression shared by scrapic and Alzheimer disease.
A;Reference number: I48174; MUID:89386721; PMID:2780570
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A;Residues: 1-703 <ALE>
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A; Introns: 15/1; 72/3; 119/1; 168/1; 212/2; 231/1;
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A;Residues: 1-72 <RE3>
A;Cross-references: GB:M17611; NID:g339480; PIDN:AAA61147.1; PID:g339485
                                                                                                                                                                                              A; Experimental source: mammary gland
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 RSVQWCAVSQPBATKCFQWQRNMRKV---RGPPVSCIKRDSPIQCIQA 48
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                                                                                                                     NCBI backbone (NCBIN:111151,
Saucedo, O.; Lee, T.; Headon,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 118.5; DB 1;
Pred. No. 3.8e-07;
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                                                                                                                         D.R.; Conneely,
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A;Accession: S52107
A;Status: preliminary
A;Molecule type: protei
A;Residues: 1-33 <QIA>
C;Superfamily: transfer
C;Keywords: duplication
                                                                                                                                                                                                                transferrin precursor - rabbit

(;Species: Cryctolagus cuniculus (domestic rabbit)

(;Species: Oryctolagus cuniculus (domestic rabbit)

C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text change 22-Jun-1999

C;Accession: S16246; A61239; C61573; S00335; S02694; A26504; S14853

R;Banfield, D.K.; Chow, B.K.C.; Funk, W.D.; Robertson, K.A.; Umelas, T.M.; Nelsonim. Biophys. Acta 1089, 262-265, 1991

A;Title: The nucleotide sequence of rabbit liver transferrin cDNA.

A;Reference number: S16246; MUID:91274362; PMID:2054387

A;Accession: S16246
R;Plerpaol1, "., "-225-234, 1991
Cell. Immunol. 134, 225-234, 1991
A;Title: Iron carrier proteins facilitate engraftment
A;Title: A61239; MUID:91191584; PMID:201310
                                                                                                  A;Molecule type: mRNA
A;Residues: 1-694 <BAN>
A;Cross-references: EMBL:X58533; NID:g1750; IR;Pierpaoli, W.; Dall'Ara, A.; Yi, C.; Neri,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R;Qian, Z.Y.; Jolles, P.; Migliore-Samour, D.; Fiat, A.M. Biochim. Biophys. Acta 1243, 25-32, 1995
A;Title: Isolation and characterization of sheep lactoferrin, A;Reference number: S52107; MUID:95127729; PMID:7827104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   F;354-691/Domain: transferrin repeat homology <TRH2>
F;28-62,38-53,129-212,171-187,184-195,245-259,362-394,372-385,419-698,439-661,471-546,49
F;77,107,206,267/Binding site: iron (Asp. Tyr. Tyr. His) #status predicted
F;135/Binding site: carbonate (Arg) #status predicted
F;409,447,540,609/Binding site: iron (Asp. Tyr. Tyr. His) #status predicted
F;477/Binding site: carbonate (Arg) #status predicted
F;477/Binding site: carbohydrate (Asn.) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  accorerrin - sheep (fragment)
;Species: Ovis orientalis aries, Ovis ammon aries
;Date: 14-Jul-1995 #sequence_revision 05-Dec-1997
;Accession: $52107
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;Cross-references: EMBL:M92089; NID:G164613; PIDN:AAA31102.1; PID:G164614
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Best Local !
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17; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RKNVRWCAISPPEGSKCYQWQKKMRKLGRP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                source: mammary gland
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56.7%;
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Pred. No. 6.3e-08;
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Pred. No. 4.4e-07;
0; Mismatches 14;
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                                                                                                  PIDN:CAA41424.1; PID:g1751, P.; Santucci, A.; Choay,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       homology
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#text_change 05-Dec-1997
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                                                                                                                                                                                                                                                                                                                         K.A.; Umelas, T.M.; Woodworth,
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                                                 allogeneic bone marrow
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A;Status: preliminary
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residus: 1-695 < ESC:
A;Cross-references: EMBL:X77158; NID:g510195; PIDN:CAA54403.1; PID:g510196
A;Cross-references: EMBL:X77158; NID:g510195; PIDN:CAA54403.1; PID:g510196
A;Cross-reference: EMBL:X77158; NID:g510195; PIDN:CAA54403.1; PID:g510196
A;Cross-reference: EMBL:X77158; NID:g510195; PIDN:CAA54403.1; PID:g510196
A;Title: Rat mammary-gland transferrin: nucleotide sequence, phylogenetic anal
A;Reference number: S54980; MUID:95234054; PMID:7717992
                                                                                                                                                                                                                                                                                                                                                                                                        C/Species: Rattus norvegicus (Norway rat)
C/Species: Rattus norvegicus (Norway rat)
C/Date: 16-Feb-1995 #sequence revision 12-May-1995 #text change 20-Aug-1999
C/Accession: S49163; S54980; A30014; A14679; A53289; A30512; I52203
R/ESCRIVA, H.; Pherce, A.; Coddeville, B.; Gonzalez, F.; Benaissa, M.; Lege: submitted to the EMBL Data Library, January 1994
A;Description: Rat mammary gland transferrin: glycan structure, nucleotide:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   transferrin precursor - rat N_{\ell}Alternate names: lung-derived growth factor; siderophilin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Superfamily: transferrin; transferrin repeat homology
C;Reywords: duplication; glycoprotein; iron transport; metal binding; plasma
F;1-18/Domain: signal sequence #status predicted <SIG>
F;19-694/Product: transferrin #status experimental <MAT>
F;19-349/Domain: transferrin repeat homology <TRH1>
F;355-682/Domain: transferrin repeat homology <TRH2>
F;37-66,37-57,136-212,155-349,176-192,179-195,189-197,245-259,357-611,363-395,373-386,44
                                                        A; Molecule type: mRNA
                                                                                   A;Status: preliminary
                                                                                                                 A;Accession:
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Biochem. J. 205, 611-617, 1982
A;Title: The preparation and partial characterization of N-terminal and A;Reference number: A26504; MUID:83074540; PMID:6816218
A;Accession: A26504
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A; Residues: 19-24,'N',26,'X',28-29,'S' <HEA>
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A; Residues: 482-515, 'V', 517-544
A; Note: 516-Ile was also found
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A;Title: Isolation, characterization and N-
A;Reference number: S00335; MUID:88209278;
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A;Residues: 19-26,'X',28-36,'X',38-53 <CHU>
R;Godovac-Zimmermann, J.
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R;Chung, M.C.M.; Chan, S.L.; Shimizu,
Int. J. Biochem. 23, 609-616, 1991
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i-695 <ES2>
erences: EMBL:X77158;
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larity 41.7%;
Conservative 1
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Pred. No. 3.9e
14; Mismatches
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8; PMID:3365331
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NID:g510195; PIDN:CAA54403.1; PID:g510196

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R;Huggenvik, J.I.; Idzerda, R.L.; Haywood, L.; Lee, D.C.; McKnight, G.S.; Gri Endocrinology 120, 332-340, 1987

A;Title: Transferrin messenger ribonucleic acid: molecular cloning and hormor A;Reference number: A30014; MUID:87053639; PMID:3023031

A;Accession: A30014

A;Molecule type: mRNA

A;Residues: 518-687, 'D',689-692, 'TA',695 <HUG-
A;Cross-references: GB:M27966; NID:g207439; PIDN:AAA42267.1; PID:g207440
A;Cross-references: GB:M27966; NID:g207439; PIDN:AAA42267.1; PID:g207440
A;Cross-ceferences: GB:M27966; NID:g207439; PIDN:AAA42267.1; PID:g207440
A;Cross-references: GB:M27966; NID:g207439; PIDN:AAA42267.1; PID:g207440
A;Cross-references: GB:M27966; NID:g207439; PIDN:AAA42267.1; PID:g207440
A;Cross-ion: A14679
A;Reference number: A14679; MUID:B0049855; PMID:500689
A;Reference number: A14679; MUID:B0049855; PMID:500689
A;Residues: 20-47 <SCH>
A;Residues: 20-47 <SCH>
A;Cavanaugh, P.G.; Nicolson, G.L.
J. Cell. Biochem. 47, 261-271, 1991
A;Accession: A3289; MUID:92165927; PMID:1791188
A;Accession: A3289; MUID:92165927; PMID:1791188
A;Accession: A3289; MUID:92165927; PMID:1791188
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A;Molecule type: protein
A;Molecule type: protein
A;Molecule type: protein
A;Residues: 89,'Y',91,'A',93-99,'V',101-102;'N',233,'AN',236-243;401-406,'N',408
A;Experimental source: lung
A;Experimental source: lung
A;Note: sequence extracted from NCBI backbone (NCBIP:86115, NCBIP:86116, NCBIP:86
A;Note: sequence extracted from NCBI backbone (NCBIP:86115, NCBIP:86116, NCBIP:86
A;Purves, L.R.; Purves, M.; Linton, N.; Brandt, W.; Johnson, G.; Jacobs, P.
R;Curves, L.R.; Purves, M.; Linton, N.; Brandt, W.; Johnson, G.; Jacobs, P.
Ricchim. Biophys. Acta 966, 318-327, 1988
A;Title: Properties of the transferrin associated with rat intestinal mucosa.
A;Reference number: A30512; MUID:88327006; PMID:3046665
A;Accession. Color mRNA
A;Molecule type: mRNA
A;Residues: 1-706 <CCAR>
A;Residues: 1-706 <CCAR>
A;Cross-references: EMBL:M69020; NID:g164242; PIDN:AAA30958.1; PID:g164243
A;Cross-references: EMBL:M69020; MID:g164242; PIDN:AAA30958.1; PID:g164243
                                                                                                                                                                                                            transferrin precursor - horse
N;Alternate names: growth-promoting factor
C;Species: Equus caballus (domestic horse)
C;Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #tex
C;Accession: S33761; S02145
R;Carpenter, M.A.; Broad, T.E.
Biochim. Biophys. Acta 1173, 230-232, 1993
A;Reference number: S33761; MUID:93277958; PMID:8504171
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S33761
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A;Residues: 20-30;639-643,'KD',646,'LKACD' <PUR>
A;Residues: 20-30;639-643,'KD',646,'LKACD' <PUR>
R;Aldred, A.R.; Howlett, G.J.; Schreiber, G.
Biochem. Biophys. Res. Commun. 122, 960-965, 1984
B;Title: Synthesis of rat transferrin in Escherichia coli containing
A;Title: Synthesis of rat transferrin in Escherichia coli containing
A;Reference number: 152203; MUID:84307580; PMID:6236811
A;Accession: 152203
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A; Accession: S33761
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A;Residues: 7-25,'X',27-56,'A',58-64,267-295 <RES>
A;Cross-references: GB:M26113; NID:g207437; PIDN:AAA42266.1;
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Best Local S
Matches 20
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41.7%;
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Pred. No. 2.2e-05;
2; Mismatches 13
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C;Superfamily: transferrin; transferrin repeat homology C;Keywords: duplication; glycoprotein; iron transport; metal binding; plasma C;Keywords: diplication; glycoprotein; iron transport; metal binding; plasma sequence #status predicted <SIG> F;20-706/Product: transferrin #status experimental <MAT> F;358-694/Domain: transferrin repeat homology <TRH2> F;26-64,36-55,134-215,174-190,177-198,187-200,248-262,360-623,366-398,376-389,423-701,44:
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C;Accession: I51350
R;Kvingedal, A.M.
Gene 150, 335-339, 1994
A;Title: Characterization of the 5' region
A;Reference number: I51350; MUID:95121925;
A;Accession: I51350
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Biochim. Biophys. Acta 1010, 28-34, 1989
A;Title: A growth-promoting factor for human myeloid leukemia cells
A;Reference number: S02145; MUID:89076897; PMID:2909248
                                                                                                                                                                                transferrin - Atlantic salmon

(Species: Salmo salar (Atlantic salmon)

(Species: Salmo salar (Atlantic salmon)

(C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_

C;Accession: T11749

C;Accession: T11749

R;Kvingedal, A.M.; Rorvik, K.A.; Alestrom, P.

Mol. Marine Biol. Biotechnol. 2, 233-238, 1993

Mol. Marine Biol. Biotechnol. 2, 233-238, 1993

A;Title: Cloning and characterization of Atlantic salmon

A;Reference number: Z17332; MUID:94122797; PMID:8293074
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A; Residues: 20-35,'X',37,'X',39-40,'X',43-44 < YOS>
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A; Residues: 1-64 < KVI>
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C;Species: Salmo salar (Atlantic salmon)
A;Experimental source: liver C;Superfamily: transferrin; C;Keywords: iron binding
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                                                                                                             A;Status: preliminary; translated from GB/EMBL/DDBJA;Molecule type: mRNA
                                                                                                                                                                A; Reference number: A; Accession: T11749
                                                                     A;Cross-references: EMBL:L20313;
                                                                                               A;Residues: 1-690 <KVI>
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                                 transferrin
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                                                                       NID:g431609; PIDN:AAA18838.1; PID:g431610
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Pred. No. 0.0086;
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PMID:7821802
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C;Superfamily: transferrin; transferrin repeat homology
C;Keywords: blocked carboxyl end; duplication; glycoprotein; lipoprotein; membrane prote
F;1-19/Domain: signal sequence #status predicted <SIG>
F;18-360/Domain: transferrin repeat homology <TRH1>
F;20-710/Product: melanotransferrin #status predicted <MTF>
F;361-709/Domain: transferrin repeat homology <TRH2>
F;316-709/Domain: transferrin repeat homology <TRH2>
F;316-709/Domain: carboxyl-terminal propeptide #status predicted <CTP>
F;361-738/Domain: carboxyl-terminal propeptide #status predicted <CTP>
F;361-709/Domain: sarboxyl-terminal propeptide #status predicted <CTP>
Search completed: September 1, 2004, 00:17:06 Job time: 29.84 secs
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A;Gene: GDB:MFI2
A;Cross-references: GDB:119387; OMIM:155750
A;Map position: 3q28-3q29
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A;Residues: 20-25,'X',27-28,'X',30 <FUR>
C;Comment: This protein is found predominantly in human melanomas and in certain fetal
C;Comment: Seven disulfide bonds are predicted in each domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: mRNA
A;Residues: 1-738 <ROS>
A;Residues: 1-738 <ROS>
A;Cross-references: EMBL:M12154; NID:g189515; PIDN:AAA59992.1; PID:g189518
A;Experimental source: melanoma
R;Furukawa, K.S.; Furukawa, K.; Real, F.X.; Old, L.J.; Lloyd, K.O.
J. Exp. Med. 169, 585-590, 1989
A;Title: A unique antigenic epitope of human melanoma is carried on the common melanoma
A;Reference number: A60925; MUID:89094252; PMID:2463331
A;Accession: A60925
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N;Alternate names: melanoma-associated antigen gp95/p97
C;Species: Homo sapiens (man)
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

45	44	43	42	41	40	u 9	38	37	36	υ U	34
50.5	51	51	51.5	51.5	51.5	52	52.5	52.5	52.5	53	53
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ALIGNMENTS

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IISSUE=Mammary gland; Cho Y.Y.; Cho Y.Y.; Thesis (1994), Genetic Engineering Research Institute / Taejon, Korea. [3] Thesis (1994), Genetic Engineering Research Institute / Taejon, Korea. [3] SEQUENCE FROM N.A. Conneely O.M.; Submitted (MAY-1992) to the EMBL/GenBank/DDBJ databases. [4] SEQUENCE FROM N.A. TISSUE=Mammary gland; Liang Q., Jimenez-Plores R., Richardson T.; "Molecular cloning and sequence analysis of human lactoferrin."; Submitted (DEC-1991) to the EMBL/GenBank/DDBJ databases. [5] SEQUENCE FROM N.A. TISSUE=Bone marrow; Wei X., Han J., Rado T.A.; "Human neutrophil lactoferrin coding and 5' flanking region DNA sequences."; SEQUENCE FROM N.A. TISSUE=Mammary gland; Cheng H., Chen X., Huan L.; "CDNA cloning and sequence analysis of human lactoferrin."; SEQUENCE FROM N.A. TISSUE=Mammary gland; Cheng H., Chen X., Huan L.; "CDNA cloning and sequence analysis of human lactoferrin."; SEQUENCE FROM N.A. TISSUE=Mammary jeland; Cheng H., Chen X., Huan L.; "CDNA cloning and sequence analysis of human lactoferrin."; SEQUENCE FROM N.A. TISSUE=TROM N.A. TISSUE=Prostate; MEDLINE=22388257; PubMed=12477932; Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G., Klausner R.D., Collins F.S., Wagner L., Shenmen C.M., Schuler G.D.,	TRFL HUMAN STANDARD; PRT; 711 AA. P02788; 000756; Q16780; Q16785; Q16789; Q96KZ4; Q96KZ5; Q9HZ3; 21-UUL-1986 (Rel. 01, Created) 15-UUL-1999 (Rel. 38, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) Lactotransferrin precursor (Lactoferrin) [Contains: Lactoferroxin A; Lattoferroxin B; Lactoferroxin C]. Lattoferroxin B; Lactoferroxin C]. LTF OR LF. Homo sapiens (Human). Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo. NCB1 TaxID=9608; [1] TISSUE=Mammary gland; MEDLINE=9038439; PubMed=2402455; MEDLINE=9038439; PubMed=2402455; MEDLINE=9038439; PubMed=2402455; MCD1 TaxID=9608; Complete nucleotide sequence of human mammary gland lactoferrin."; Nucleic Acids Res. 18:5288-5288(1990).

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MEDLINE=82046817; PubMed=6794640;
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MEDLINE=99190892; PubMed=10089347;
Sun X.L., Baker H.M., Shewry S.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               binding properties and 253-->methionine mutan
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Haridas M., Anderson B.F., Baker E.N.;
"Structure of human diferric lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     J. Mol. Biol. 209:711-734(1989)
                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=99091914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHARACTERIZATION OF LACTOFERROXINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=99192677;
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                                                                                                          ween the European
                                                                                                                                                  SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Secreted.
DOMAIN: Composed of two homologous domains.
SIMILARITY: Belongs to the transferrin family.
                                                                           SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way by non-profit institutions as long as its content is no way by and this statement is not removed. Usage by and for commercial fied and this statement is not removed. Usage by and for commercial ties requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Crystallogr. D 55:403-407(1999).
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X53961;
U07643;
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Matches 47; Conserv
                                                                                                        EMBL; AJ010930; CAA09407.1; -.

PDB; 1BTU; 02-FEB-99.

PDB; 1B7U; 02-FEB-99.

PDB; 1F9B; 10-FEB-01.

PDB; 116B; 13-FEB-02.

PDB; 116B; 13-FEB-02.

PDB; 1170; 14-JAN-00.

InterPro; IPR001156; Transferrin.

Pfam; PF00405; transferrin; 2.

PRINTS; PR00422; TRANSFERRIN 1; 2.

PRINTS; PR00422; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 2; 2.

PROSITE; PS00207; TRANSFERRIN 3; 1.

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15-JUL-1999
10-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         resolution.";
J. Mol. Biol. 289:303-317(1999).
J. Mol. Biol. 289:303-317(1999).
I- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING OF AN ANION, USUALLY BICARBONATE.
-I- SUBCELLULAR LOCATION: Secreted.
-I- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-JUL-1999 (Rel. 38, Created)
15-JUL-1999 (Rel. 38, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Lactotransferrin precursor (Lactoferrin) (Fragment).
LTF.
                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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Paramasivam M., Srinivasan A., Yadav M.P., Singh T.P.,

"cDNA sequence of mare lactoferrin.";

submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sharma A.K., Paramasivam M., Srinivasan A., Yadav M.P., Singh T.P.; "Three-dimensional structure of mare diferric lactoferrin at 2.6-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Perissodactyla; Equidae; Equus.
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                                                                                               3D-structure.
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Pred. No. 6
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Q29477; Q29479;
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15-DEC-1998 (Rel. 37, Last s
10-OCT-2003 (Rel. 42, Last a
Lactotransferrin precursor (
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PRINTS; PRO0422; TR FER; 2.

SMART; SM00094; TR FER; 2.

PROSITE; PS00205; TRANSFERRIN_2; 2.

PROSITE; PS00206; TRANSFERRIN_2; 2.

PROSITE; PS00207; TRANSFERRIN_3; 2.

PROSITE; PS00207; TRANSFERRIN_3; 2.
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"Characterization of the goat lactoferrin cDNA. Assignment of trelevant locus to bovine U12 synteny group.";
Biochem. Blophys. Res. Commun. 203:1324-1332(1994).
-!- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE E OF AN ANION, USUALLY BICARBONATE.
-!- SUBUNIT: Monomer (By similarity).
-!- SUBCELLULAR LOCATION: Secreted.
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Pfam; PF00405; transferrin; 2.
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EMBL; X78902; CAA55517.1;
HSSP; O77698; 1CE2.
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Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprinae; Capra.
NCBI TaxID=9925;
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Lee T., Yu S., Kim S., I
Submitted (APR-1996) to
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o the EMBL/GenBank/DDBJ databases.
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| RRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48

Query Match
Best Local Similarity
Matches 28; Conserv

61.4%; nilarity 60.9%; Conservative

Score 164; DB 1; Pred: No. 1.8e-13; 9; Mismatches 9;

Length 695; Indels

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RESULT 4A PREL_CAMBR
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RN [2]
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    TISSUE-Mammary gland;
Paramasivam M., Srinivasan A., Singh R., Sahani M.S., Singh T.E Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE E OF AN ANION, USUALLY BICARBONATE (BY SIMILARITY).
                                                                                                                                                          SEQUENCE FROM N.A.
STRAIN=Somali; TISSUE=Lactating mammary gland;
Kappeler S.R., Ackermann M., Farah Z., Puhan Z.;
"Sequence analysis of camel (Camelus dromedarius)
int. Dairy J. 9:481-486(1999).
                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
Mammalia; Eutheria;
NCBI_TaxID=9838;
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                                                                                                                         SEQUENCE
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Similarity 54.3%;
25; Conservative
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1. 40, Last sequ
1. 42, Last anno
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Chordata; Craniata; Vertebrata; Eutel
Cetartiodactyla; Tylopoda; Camelidae;
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S -> P (IN REF. 2).
S -> R (IN REF. 2).
C -> G (IN REF. 2).
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Pred. No. 2.5e
L3; Mismatches
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Signal; 3D-
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EMBL; AF165879; AAF82241.1; -.
PDB; IDTZ; 20-JUN-01.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00206; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
Transport; Iron transport; Glycoprotein; Me
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SUBCELLULAR LOCATION: Secreted.
DOMAIN: Composed of two homologous dome
SIMILARITY: Belongs to the transferrin
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3D-structure
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CARBONATE 1 (BY SIMILARITY).
CARBONATE 1 (BY SIMILARITY).
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                                                                                                                                                 RA Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Klausner R.D., Collins F.S., Wagner L., Schenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Altschenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Platchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
Stapleton M., Soares M.B., Bonaldo M.F., Casavant T.L., Scheetz T.E.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Raha S.S., Loquellano N.A., Petcers G.J., Abramson R.D., Mullahy S.J.,
RA Bosak S.A., McEwan P.J., McKernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
Villalon D.K., Muzny D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Pahey J., Helton E., Ketteman M., Madan A., Rodrigues S., Sanchez A.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Rodriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
"Generation and initial analysis of more than 15,000 full-length
numan and mouse cDNA sequences.",
RN 141
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Best Local S
Matches 26
                                                             J. Biol.
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SEQUENCE
"Characterization of estrogen-responsive mouse lactoferrin promoter.";
J. Biol. Chem. 266:21880-21885 (1991).
-:- FUNCTION: TRANSFERINS ARE IRON BINDING TRANSPORT PROTEINS WHICH CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING OF AN ANION, USUALLY BICARBONATE.
-:- SUBUNIT: Monomer.
                                                                                                            MEDLINE=92042099; PubMed=1939212;
                                                                                                                           SEQUENCE OF 1-14 FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=22388257;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=87280033; PubMed=3611056;
Pentecost B.T., Teng C.T.;
"Lactotransferrin is the major estrogen inducible protein of mouse uterine secretions.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lactotransferrin precursor (Lactoferrin).
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Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
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                                                                                          Teng C.
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etazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_2;
PROSITE; PS00206; TRANSFERRIN_3;
PROSITE; PS00207; TRANSFERRIN_3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; J03298; AAA40525.1; -.
EMBL; D88510; BAA13633.1; -.
EMBL; D8065004; AAA106504.1; -.
EMBL; M74778; AAA39427.1; -.
HSSP; P02788; 1CB6.
                                                                                BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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InterPro; IPR001156; Transferrin.
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DOMAIN: Composed of two homologous domains.

SIMILARITY: Belongs to the transferrin family.
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M -> L (IN REF. 2).
S -> T (IN REF. 2).
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Score 159; DB Pred. No. 8.1e-6; Mismatches

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15-JUL-1999
10-OCT-2003
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DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.

Paramasivam M., Thattaliyath B.D., Kumar A., Srinivasan Singh T.P.;

"cDNA sequence of Buffalo lactoferrin.";

Submitted (JUN-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                           EMBL; AJ005203; CAA06441.1; -.
PDB; ICE2; 19-MAR-99.
PDB; IBIY; 13-JAN-99.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboratio between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no wall modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce or send an email to license@isb-sib.ch).
                                                  Transport; Iron transportsignal; 3D-structure.
                                                                                PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00206; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
TRANSFERRIN 3; 2.
TRANSFERRIN 3; 2.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Bovinae; Bubalus.
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(Rel. 38, Last sequence update)
(Rel. 42, Last annotation update)
prrin precursor (Lactoferrin).
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Eukaryota; Metazoa; Cho
Mammalia; Eutheria; Cet.
Bovidae; Bovinae; Bos.
NCBI TaxID=9913;
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SEQUENCE FROM N.A.
TISSUE-Submaxillary gland;
MEDLINE-91160550; PubMed-2001696;
MEDLINE-91. Colavizza D., Benaissa M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.

MEDIINE=92028986; PubMed=1718281;

Goodman R.E., Schanbacher F.L.;

"Bovine lactoferrin mRNA; sequence,

"Bovine lactoferrin mRNA; sequence,
                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Lung;
Tsang T.C., Burns D.K., Wang
"Cloning of a 80-kD advanced
protein from bovine lung.";
PASEB J. 6:233-233(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TRFL BOVIN STANDARD; PRT; 708 AA. P24627; Q29629; Q9M2Y3; 01-MAR-1992 (Rel. 21, Created) 01-OCT 1993 (Rel. 27, Last sequence update) 10-OCT-2003 (Rel. 42, Last annotation update) Lactotransferrin precursor (Lactoferrin) [Con(LFCIN B)].
                                                                                                                      SEQUENCE OF 20-59.

MEDLINE=90031466; PubMed=2805645;
Rejman J.J., Hegarty H.M., Hurley W.L.;
"Purification and characterization of bovine secretions of the involuting mammary gland: multiple molecular weight forms.";
Comp. Biochem. Physiol. 93B:929-934(1989).
STRUCTURE BY NMR OF 36-60.
MEDLINE=98190007; PubMed=9521752;
                                    "Three-dimensional structure of resolution.";
J. Mol. Biol. 274:222-236(1997).
                                                             MEDLINE=98062367; PubMed=9398529;
Moore S.A., Anderson B.F., Groom C.R., Ha
"Three-dimensional structure of diferric
                                                                                                                                                                                                                                                                                              "Structure of the
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TISSUE=Blood, and Mammary gland;
MEDLINE=94266164; PubMed=8206385;
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Eur. J. Biochem. 196:177-184(1991).
[2]
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                                                                                                   (-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS)
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JL-2000) to the
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he bovine lactoferrin-encoding gene an
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s EMBL/GenBank/DDBJ
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DR EMBL; M63502; AAA30617.1; -.

DR EMBL; L109604; AAA30609.1; -.

PR EMBL; L10980; AAA21722.1; JOINED.

REMBL; L10982; AAA21722.1; JOINED.

REMBL; L10983; AAA21722.1; JOINED.

REMBL; L10984; AAA21722.1; JOINED.

REMBL; L10985; AAA21722.1; JOINED.

REMBL; L10986; AAA21722.1; JOINED.

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REMBL; L10990; AAA21722.1; JOINED.

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REMBL; L1099
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"Three-dimensional solution structure of lactoferricin B, an
antimicrobial peptide derived from bovine lactoferrin.";
Biochemistry 37:4288-4298(1998).

-!- FUNCTION: TRANSFERRINS ARE IRON BINDING TRANSPORT PROTEINS WHICH
CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE BINDING
OF AN ANION, USUALLY BICARBONATE.
-!- FUNCTION: LACTOFERRICIN B IS AN ANTIMICROBIAL PEPTIDE.
-!- SUBCELULAR LOCATION: Secreted.
-!- SUBCELULAR LOCATION: Secreted.
-!- SUMCILULAR LOCATION: Secreted.
-!- DOWAIN: Composed of two homologous domains.
-!- SIMILARITY: Belongs to the transferrin family.
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3D-structure
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Transport; Iron Signal; Antibio Signal; Antibi

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IDA_PIGA
AC Q29545;
DT 15-JUL-1999
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Pfam; PF00405; transferrin; 2.
PFLNTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00206; TRANSFERRIN_2; 1.
PROSITE; PS00206; TRANSFERRIN_2; 1.
PROSITE; PS00207; TRANSFERRIN_3; 2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    inhibitor from porcine plasma.";
Biochemistry 31:12536-12542(1992).
-!- FUNCTION: Specifically binds a
with manomolar affinity.
-!- SUBUNIT: Monomer.
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PIR; 147228; I47228.
HSSP; P19134; 1TFD.
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                        Glycoprotein; SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochemistry 36:4327-4336(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Purification and characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=93099129; PubMed=1463741;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: SecriTISSUE SPECIFICITY: Plasma PTM: N-91ycosylated.
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                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                          RRSVQWCAVSQPEATKCFQWQRNMRK---VRGPPVSCIKRDSPIQCIQA
                                                                                                                                            KETVRWCTVSSQEASKCSSFRHMKKILPVEGPHVSCVKRTSYLECIRA
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Cetartiodactyla; Suina; Suidae;
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INHIBITOR OF CARBONIC ANHYDRASE.
N-LINKED (GLCNAC. . .) (POTENTIJ
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1; Mismatches
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Pred. No. 2e
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01-MAR-1989
01-FEB-1991
10-OCT-2003
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pfam; PF004405; transferrin.
pRINTS; PR00422; TRANSFERRIN.
sMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00205; TRANSFERRIN_2; 2.
PROSITE; PS00206; TRANSFERRIN_3; 2.
PROSITE; PS00207; TRANSFERRIN_3; 2.
rransport; Iron transport; Glycoprotein; Metal-binding; Repeat;
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or send a
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PIR; S01384; S01384.
PDB; 1H76; 15-JAN-02.
InterPro; IPR001156; Transferrin.
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                                                                                                                                                                                                                                                                                                                                                      tities requires a license agreement (S send an email to license@isb-sib.ch).
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(Rel. 17, Last annotation update)
(Rel. 42, Last annotation update)
rrin (Transferrin) (Siderophilin)
 Weinstock J.;
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VARIANT
                                                                                                                                                                                                                            Schaeffer E., Lucero M.A., Jeltsch, Chambon P., Cohen G.N., Zakin M.M., ""Complete structure of the human tranalogous chicken gene and human ps. Gene 56:109-116(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRFE_HUMAN STANDARD; PRT; 6
P02787; 043890; Q9NQB8; Q9UHV0;
21-JUL-1986 (Rel. 01, Created)
01-CCT-1989 (Rel. 12, Last sequence up
10-CCT-2003 (Rel. 42, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND VARIANTS TF*B2; TF*C MEDILINE=84194084; PubMed=6585826; Wang F., Lum J.B., McGill J.R., Moore C.M., van Bragt P.H., Baldwin W.D., Bowman B.H.; "Human transferrin: cDNA characterization ar
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   SEQUENCE FROM N.A.,
MEDLINE=20563920; P
Beutler E., Gelbart
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Williams P., D
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Hershberger C.L., Larson J.L., Ar
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Gelbart T., Lee
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                                                                                                                      Dehoff B., 1
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                                                                      for human transferrin."; . Sci. 646:140-154(1991).
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 Fernandez M.A.,
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McGillivray R.T.A., Men
Lineback-Zins J., Brew
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"Molecular cloning and sequence analysis
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Woodworth R.C., Baker E.N.;
"Ligand-induced conformational
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gene expression shared by scrapie and
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                                   s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EW Buropean Bioinformatics Institute. There are no restr by non-profit institutions as long as its content if the statement is not removed. Usage by and
                                                                                                          DOMAIN: Composed of two homologous domains. SIMILARITY: Belongs to the transferrin family.
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           an
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                                                                                                                                                                                                                                                                                               92367939; PubMed=1503259;
r.L.J. Levine W.B., Teng C.T.,
and sequencing of the porcine
net. 23:251-256(1992).
          requires a license agreement (See http://www.isb-sib
an email to license@isb-sib.ch).
                                  non-profit institutions a and this statement is not
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|<u>x</u>
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                                                                                                                                                 Monomer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
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1. 42, Last :
n precursor
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                                                                                                                                                                                                                                                            PubMed=2605266;
                                                                                                                                                                                                                                                                                                                                                                                                                       PubMed=1511016;
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G277S mutati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chordata; Craniata; Vertebrata; Euteleostomi; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
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1132:97-99(1992).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        annotation update) (Lactoferrin).
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3; Mismatches
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lactoferrin
                                               There are no restrictions ng as its content is in
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d V., Moss
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V., Mosser J.;
n eight genes
c extraction
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EMBL; M. 1CEZ.

EMBL; M. 1CEZ.

HSSP; C77698; 1CEZ.

Interpro; IrPR001156; Tra...

Pfam; PF00405; transferrin; 2.

Pfam; PF00405; transferrin.

SMATT; SM00094; TR FER; 2.

POSITE; PS00205; TRANSFERRIN_1; 2.

PS00206; TRANSFERRIN_2; 2.

PS00206; TRANSFERRIN_3; 1.

PS00206; TRANSFERRIN_3; 1.
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Matches 20
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CARBOHYD
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REPEAT
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EMBL; M81327; AAA31059.1;
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                                                                           Similarity
         RRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
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478
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IRON 1 (BY SIMILARITY).
IRON 2 (BY SIMILARITY).
IRON 2 (BY SIMILARITY).
IRON 2 (BY SIMILARITY).
CARBONATE 1 (BY SIMILARITY).
CARBONATE 1 (VIA AMIDE NITROGEN) (SIMILARITY).
CARBONATE 2 (BY SIMILARITY).
                                                       10;
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N-LINKED (GLCNAC...
G-W (IN REF. 1).
RRT-YTR (IN REF. 2).
M-S (IN REF. 1).
D-S (IN REF. 2).
T-Y (IN REF. 1).
E-S (IN REF. 1).
E-S (IN REF. 1).
D-S (IN REF. 1).
C-Y (IN REF. 1).
V-Y (IN REF. 1).
                                                Score 118; DB
Pred. No. 1.5e
lO; Mismatches
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SIMILARITY).
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                                                Gaps
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RESULT 12

TRFE BOVIN

ID TRFE BOVIN

AC 029443;
DT 01-NOV-1997 (
DE SETOTRANSFORT

DE BUKARYOTA; ME

OC Bordaal; Bovin

RT SUBUELLY SETOTRANSFORT

RT "PRODUCE FROM

RC TISSUE=Liver; MEDILIANIS

RAT "PRODUCE FROM

RC TISSUE=Liver; MEDILIANIS

CC MEDILIANIS

CC L-I-SUBUELTU

CC -I-SUBURIT:

CC
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J. Biol. Chem. 271:1166-1173(1996).

J. Biol. Chem. 271:1166-1173(1996).

FUNCTION: Transferrins are iron binding transport proteins which can bind two attoms of ferric iron in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation.

J. SUBCINIT: Monomer (By similarity).

J. SUBCILILLAR LOCATION: Secreted.

J. TISSUE SPECIFICITY: Expressed by the liver and secreted in plasma.

J. DOMAIN: Composed of two homologous domains.

J. SIMILARITY: Belongs to the transferrin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a coptween the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entitles requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                         PRINTS; PR00422; TRANSFERRIN
PROSITE; PS00205; TRANSFERRIN
PROSITE; PS00206; TRANSFERRIN
PROSITE; PS00207; TRANSFERRIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U02564; AAA96735.1; -.
HSSP; P19134; 1TFD.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
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Retzer M.D., Kabani A., Button L.L., Yu R.H., Schryvers A.
"Production and characterization of chimeric transferrins
determination of the binding domains for bacterial transfe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Ch
Mammalia; Eutheria; Ce
Bovidae; Bovinae; Bos.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
10-OCT-2003 (Rel. 42, Last annotation update)
Serotransferrin precursor (Transferrin) (Siderophilin) (Beta-1-metal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                    transport;
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TRANSFERRIN 2; 2.
TRANSFERRIN 3; 1.
TRANSFERRIN 3; 1.
ransport; Glycoprotein; Metal-binding;
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  BY SIMILARITY.
SEROTRANSFERRIN.

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2.
BY SIMILARITY.
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RESULT 1,

TRFE RABIT

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AC 91933; 046514;

AC 91934;

AC 91934;
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Banfield D.K., Chow B.K.-C., Funk W.D., R
Woodworth R.C., Macgillivray R.T.A.;
"The nucleotide sequence of rabbit liver
Biochim. Biophys. Acta 1089:262-265(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BINDING
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
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Submitted
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15-JUL-1999 (Rel. 38, Last sequence up
10-OCT-2003 (Rel. 42, Last annotation
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         SEQUENCE OF 20-51.
MEDLINE=88209278;
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                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9986;
                                                                                                                                                                                                                                                                                                                                                                                                                                binding
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                                                                                              "Cloning
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New Zealand white;
                                                                                                               B.A.A., Thepot
ne L.M.;
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                                                               (OCT-1997)
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                                                                                                stuctural
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             PubMed=3365331
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CARBONATE 1 (VIA AMIDE NITROGEN) (
SIMILARITY).

CARBONATE 2 (BY SIMILARITY).

CARBONATE 2 (BY SIMILARITY).

CARBONATE 2 (VIA AMIDE NITROGEN) (
SIMILARITY).

CARBONATE 2 (VIA AMIDE NITROGEN)
                                                                                                                                  Puissant
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CARBONATE 1
                                                               EMBL/GenBank/DDBJ
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Pred. No. 8.6e-07;
2; Mismatches 13
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                                                                                                                                   Cajero-Juaerez
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(BY SIMILARITY).
(VIA AMIDE NITROGEN)
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 EMBL; X58533; CAA41424.1; ---
EMBL; AF031625; AAB94136.1; U
EMBL; AF031612; AAB94136.1; U
EMBL; AF031612; AAB94136.1; U
EMBL; AF031613; AAB94136.1; U
EMBL; AF031613; AAB94136.1; U
EMBL; AF031615; AAB94136.1; U
EMBL; AF031616; AAB94136.1; U
EMBL; AF031618; AAB94136.1; U
EMBL; AF031618; AAB94136.1; U
EMBL; AF031618; AAB94136.1; U
EMBL; AF031621; AAB94136.1; U
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EMBL; AF031624; AAB94136.1; U
EMBL; AF031624; AAB94136.1; U
Transport;
Signal; 3D-
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                                              Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR_PER; 2.
PROSITE; PS00205; TRANSFERRIN_2;
PROSITE; PS00206; TRANSFERRIN_2;
PROSITE; PS00207; TRANSFERRIN_3;
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PDB; 1JNF; 09-JAN-02.
InterPro; IPR001156;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bailey S., Evans R.W., Garratt R.C., Gorinsky B., Hasnain S., Horsburgh C., Jhoti H., Lindley P.F., Mydin A., Sarra R., Watson "Molecular structure of serum transferrin at 3.3-A resolution."; Biochemistry 27:5804-5812(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS).
Sarra R., Garratt R.C., Gorinsky B., Jhoti'H., Lindley P.F.;
"High-resolution X-ray studies on rabbit serum transferrin:
preliminary structure analysis of the N-terminal half-molecule
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Biol. Chem. Hoppe-Seyler 369:93-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Evans R.W., Aitken A., Patel K.J.;
"Evidence for a single glycan moiety in rabbit location of the glycan within the polypeptide FEBS Lett. 238:39-42(1988).
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MEDLINE=89005676;
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Acta Crystallogr. B 46:763-771(1990).
Acta Crystallogr. B 46:763-771(1990).
Can bind two atoms of ferric iron in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation.
                                                                                                                                                                                                                                                       SUBUNIT: Monomer.
SUBCELDULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed by the liver and DCMAIN: Composed of two homologous domains.
SIMILARITY: Belongs to the transferrin family.
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n A., Patel K.J.
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                                    oved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
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CARBONATE 2 (VIA AMIDE NI V -> I.
MISSING (IN REF. 1).
K -> S (IN REF. 3).
F -> Y (IN REF. 3).
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RX Strausberg R.L., Feingold E.A., Grouse L.H., Derge J.G.,
RA Strausberg R.L., Feingold E.A., Grouse L.H., Shenmen C.M., Schuler G.D.,
RA Klausner R.D., Collins F.S., Wagner I., Shenmen C.M., Schuler G.D.,
RA Altschul S.F., Zeeberg B., Buetow K.H., Schaefer C.F., Bhat N.K.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
RA Hopkins R.F., Jordan H., Moore T., Max S.I., Wang J., Heich F.,
RA Blatchenko L., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Blatchenko I., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Blatchenko I., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Blatchenko I., Marusina K., Farmer A.A., Rubin G.M., Hong L.,
RA Blatchenko I., Usdin T.B., Toshiyuki S., Carninci P., Prange C.,
RA Brownstein M.J., Usdin T.B., Toshiyuki S., Carninci P., Prange C.J.,
RA Blatchenko I., McZernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., McZhen P.J., McZernan K.J., Malek J.A., Gunaratne P.H.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Worley K.C., Hale S., Garcia A.M., Gay L.J., Hulyk S.W.,
RA Richards S., Warney D.M., Sodergren E.J., Lu X., Gibbs R.A.,
RA Richards S., Wall A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Whiting M., Madan A., Young A.C., Shevchenko Y., Bouffard G.G.,
RA Holdriguez A.C., Grimwood J., Schmutz J., Myers R.M.,
RA Butterfield Y.S.N., Krzywinski M.I., Skalaka U., Smailus D.E.,
"Generation and initial analysis of more than 15,000 full-length
human and mouse cDNA sequences.";
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28-FEB-2003 (Rel. 41, Last sequence update)
15-MAR-2004 (Rel. 43, Last annotation update)
Serotransferrin precursor (Transferrin) (Siderophilin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. TISSUE=Liver;
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Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
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STRAIN=BALB/c; TISSUE=Liver;
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Mammalia; Eutheria;
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0921II; 035421; Q61803; Q62358;
0922C0;
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Similarity 41.7%;
20; Conservative :
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76670 MW;
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Rodentia;
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Pred. No. 1.3e-
14; Mismatches
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; Q62359; Q63915; Q64515;
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EMBL; AF440692; AAL34533.1; -.
EMBL; BC012313; AAH12313.1; -.
EMBL; BC022988; AAH22986.1; -.
EMBL; BC0028589; AAH38589.1; -.
EMBL; AF027336; AAB84034.1; -.
EMBL; M23014; AAA40499.1; -.
EMBL; M23016; AAA40491.1; -.
EMBL; M23016; AAA40491.1; -.
EMBL; M23016; AAA40491.1; -.
EMBL; M23016; AAA40491.1; -.
EMBL; M23016; AAB40491.1; -.
EMBL; M23016; AAB343438.1; -.
EMBL; S67217; AAB28966.2; -.
EMBL; S67217; AAB28966.2; -.
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GO, GO:0030139; C.endocytic vesi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rransferrin mRNA level in the mouse pregnancy and extracellular matrix.", J. Biol. Chem. 262:17247-17777
                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a c between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restrict use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fo entities requires a license agreement (See http://www.isb-sib.or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Transferrin gene expression placenta during pregnancy in Placenta 14:365-371(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chaudhary J., Skinner M.K.; "Comparative sequence analysis promoters: hormonal regulation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Proc.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 282-412 FROM N.A. MEDLINE=87280033; PubMed=3611056;
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MEDLINE=88086992; Pul
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STRAIN=BALB/c;
         InterPro; IPR001156; Transferrin.
Pfam; Pr00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
PROSITE; PS00205; TRANSFERRIN. 1; 1.
PROSITE; PS00206; TRANSFERRIN. 2; 2.
PROSITE; PS00207, TRANSFERRIN. 3; 2.
Transport; Iron transport; Glycoprotein;
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                                                                                                                                                                                                                                                                                                                                                                                          SUBUNIT: Monomer.
SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: Expressed by the liver and DOMAIN: Composed of two homologous domains.
SIMILARITY: Belongs to the transferrin family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                have a further role in stimulating cell proliferation.
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PubMed=3693348;
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P12346; Q64628; Q64630;
01-OCT-1989 (Rel. 12, Created)
15-UUL-1999 (Rel. 38, Last sequence up
10-OCT-2003 (Rel. 42, Last annotation)
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P -> L (IN REF. 5).
CP -> SA (IN REF. 6).
G -> C (IN REF. 4).
A -> D (IN REF. 4).
K -> N (IN REF. 4).
K -> N (IN REF. 1).
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EMBL; D38380; BAA07458.1; -.
EMBL; X77158; CAA54403.1; -.
EMBL; X7956; AAA42267.1; -.
PIR; S49163; S49163.
PIR; S49163; S4916.
HSSP; P19134; ITFD.
GlycoSuiteDB; P12346; -.
InterPro; IPRO01156; Transferr
Pfam; PF00405; transferrin; 2.
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SEQUENCE FROM N.A.
STRAIN=Wistar; TISS
                                                    PRINTS; PR00422; TKANSFERRIN 1; 1.
PROSITE; PS00205; TRANSFERRIN 2; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
Transport;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Transferrin messenger ribonucleic acid: molecular cloning and hormonal regulation in rat Sertol cells."; Endocrinology 120:332-340(1087).

-I- FUNCTION: Transferrins are iron binding transport proteins which can bind two atoms of ferric iron in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation.

-I- SUBCILIULAR LOCATION: Secreted.

-I- TISSUE SPECIFICITY: Expressed by the liver and secreted in plasma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=80049855; PubMed=500689; Schreiber G., Dryburgh H., Millership A., Matsuda Phillips J., Edwards K., Maggs J.; "The synthesis and secretion of rat transferrin."; J. Biol. Chem. 254:12013-12019(1979).
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STRAIN-Wistar, TISSUE=Mammary gland,

MEDLINE=95234054; PubMed=7717992;

Escriva H., Pierce A., Coddeville B., Gonzalez F.,

Leger D., Wieruszeski J.M., Spik G., Pamblanco M.,

"Rat mammary-gland transferrin: nucleotide sequence
analysis and glycan structure.",

Biochem. J. 307:47-55(1995).
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Hosino A., Hisayasu S., Shimada T.;
"Complete sequence analysis of rat transferrin and expression
transferrin but not lactoferrin in the digestive glands.";
Comp. Biochem. Physiol. 113B:491-497(1996).
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Mammalia; Eutheria;
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Huggenvik J.I., Idzerda
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; PubMed=3023031;
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AFGCYGVPPRMDYRLYLGHSYVTAIRNQRBGVCPEAS -> REGLIRAPKUGLQAVPRPQLCHCHSKSAGSCPDA (IN REF. 2).

S -> G (IN REF. 2).

S -> G (IN REF. 4).

HK -> TA (IN REF. 4).

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Pred. No. 4.3e-06;
Mismatches 12;
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sp_plant:*
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Copyright (c) 1993 - 2004
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Q7ys20 sus scrofa
Q9tr80 ovis aries
Q9tb40 mus musculu
Q7tsx8 marmota mon
Q7tnx0 rattus norv
Q8vc96 mus musculu
Q7tmc7 rattus norv
Q7tp24 rattus norv
Q9tqv7 equus cabal
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Q8iu92 homo
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Q8tcd2 homo
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Best Local S
Matches 47
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"Human lactoferin gene, 5' regulation region and exons 1-6.";

"Human lactoferin gene, 5' regulation region and exons 1-6.";

Exbantted (MAY-2002) to the EMBL/GenBank/DDBJ databases.

R EMBL; AF508798; AAO14686.1;

R GO; GO:0005576; C:extracellular; IEA.

R GO; GO:0008199; F:ferric iron binding; IEA.

R GO; GO:0006879; P:iron ion homeostasis; IEA.

R GO; GO:0006879; P:iron ion transport; IEA.

R GO; GO:0006879; P:iron ion transport; IEA.

R GO; GO:0006879; Transferrin.

R PRINTS; PRO0405; Transferrin.

R PRINTS; PRO0405; TRANSFERRIN.

R PROSITE; PS00206; TRANSFERRIN.
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Q8IX02;
01-MAR-2003 (TrEMBLrel. 2
01-MAR-2003 (TrEMBLrel. 2
01-OCT-2003 (TrEMBLrel. 2
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Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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22 RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPFVSCIKRDSPIQCIQA
                                                                                      2 RRRSVQWCAVSQPEATKCFQWQRNMRKVRGPPVSCIKRDSPIQCIQA 48
                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                  97.8%; Score 261; DB 4; 1
100.0%; Pred. No. 2.1e-28;
Live 0; Mismatches 0;
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Best Local S
Matches 45
  TISSUE-Seminal vesicle;
Baskar Singh S., Saravanan K., Pari
Singh T.P.;
"Homo sapiens lactoferrin (HLF) mRI
Submitted (DEC-2002) to the EMBL/GI
EMBL; AY165046; AAN63998.1; -.
EMBL; AY178998; AAN75578.2; -.
GO; GO:0005576; C:extracellular; II
GO; GO:0008199; F:ferric iron bindi
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Q8IU92;
01-MAR-2003
01-MAR-2003
01-OCT-2003
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Keplan U.B., Fine D.H.;

"Characterization of an amino acid polymorphisy
domain of human lactoferrin.";

Submitted (JUL-2002) to the EMBL/GenBank/DDBJ

EMBL, AY137470; AAN11304.1;

GO; GO:0008199; F:ferric iron binding; IEA.

GO; GO:0008199; F:ferric iron binding; IEA.
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Mammalia; Eutheria;
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN 1; 2.
PROSITE; PS00206; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITE; PS00207; TRANSFERRIN 3; 2.
PROSITENCE PS 11 AN 78126 MW. 6472
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01-MAR-2003
01-MAR-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                    TISSUE=Mammary gland;
Shi Y.-Q., Zhang Y., Zheng Y.-M.;
"Homo sapiens Lactotransferrin Gene: cDNA Cloning
                                                                                                                                                                                                                                                                      Analysis
                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens
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Pfam; PF00405; transferrin; 2.
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Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
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Primates;
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                                                                                                                 (HLF) mRNA.";
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Last sequence update)
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(Lactoferrin).
                                                                                             EMBL/GenBank/DDBJ
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Catarrhini;
    binding;
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                                                                                                                                                           Paramasivam
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                           IEA.
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RESULT 5
Q8CBA0
ID Q8CE
AC Q8CE

Q8CBA0;

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                                                                                                              Pfam; PFU04012; TRANSFL...

R PRINTS; PR00422; TRANSFL...

R SMART; SM00094; TR FER; 2:

PROSITE; PS00205; TRANSFERRIN 1; 2.

DR PROSITE; PS00206; TRANSFERRIN 3; 2.

DR PROSITE; PS00207; TRANSFERRIN 3; 2.

PROSITE; PS00206; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 1; 2.

PROSITE; PS00206; TRANSFERRIN 3; 2.

PROSITE; PS00206; TRANSFERR
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Q8TCD2
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                                                                                    Query Ma
Best Loc
Matches
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Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.

L Submitted (FEB-2002) to the EMBL/GenBank/DDBJ databases.

C ci- FUNCTION. TRANSFERRINS ARE IRON BINDING TRANSFORT PROTEIN

C CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE

C CAN BIND TWO ATOMS OF FERRIC IRON IN ASSOCIATION WITH THE

OF AN ANION, USUALLY BICARBONATE (BY SIMILARITY).

C --- SIMILARITY: BELONGS TO THE TRANSFERRIN FAMILY.

REMBL, BC022347, AAH22347.1; ---

RR GO; GO:0005576; C:extracellular; IEA.

RGO; GO:0005576; C:extracellular; IEA.

RGO; GO:0006899; F:ferric iron binding; IEA.

RGO; GO:0006899; P:iron ion homeostasis; IEA.

RGO; GO:0006899; P:iron ion transport; IEA.

RGO; GO:0006890; P:iron ion transport; IEA.
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Best Local S
Matches 45
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Q8TCD2;
01-JUN-2002
                                                                                                                                                                                                                                                                                                                              InterPro; IPR001156; Transferrin. Pfam; PF00405; transferrin; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens (Human)
Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Signal.
SIGNAL
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PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1;
PROSITE; PS00206; TRANSFERRIN_2;
PROSITE; PS00207; TRANSFERRIN_3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE=Prostate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9606;
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GO; GO:0006826; P:iron ion transp
InterPro; IPR001156; Transferrin.
                                                                                                         Local :
22
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RRRSVQWCAVSQPEATKCFQWQRNMRKVCGPPVSCIKRDSPIQCIQA
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711 AA;
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(TrEMBLrel.
                                                                                      Conservative
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78382 Þ
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Primates;
                                                                                                         94.8%;
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25,
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                                                                                    Score 253; DB Pred. No. 8.4e 0; Mismatches
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Pred. No. 6.1e-27;
1; Mismatches 1
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LACTOTRANSFERRIN.
; 547BFC42C9267E67 CRC64;
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                                                                             DB 4;
8.4e-27;
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                                                                                                                                                                        Transport FAF CRC64;
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Best Local
Query Match
Best Local Similarity
Matches 31; Conserv
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01-MAR-2003
01-OCT-2003
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Nature 420:563-573(2002).
EMBL; AK036491. processing the control of 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-MAY-2000
01-MAY-2000
01-OCT-2003
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PRINTS; PR00425; TRANSFERRIN.
SMART; SM00094; TR PER; 2.
PROSITE; PS00205; TRANSFERRIN_1; 1.
PROSITE; PS00206; TRANSFERRIN_2; 2.
PROSITE; PS00206; TRANSFERRIN_2; 2.
PROSITE; PS00207; TRANSFERRIN_3; 2.
SEQUENCE 707 AA; 77837 MW; E1B32F5FD8748A0F CRC64;
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GO; GO:0005576; C:extracellular; IEA.
GO; GO:0008199; F:ferric iron binding; CO; GO:0008879; P:fron ion homeostasis; GO; GO:0006826; P:iron ion transport; II
InterPro; IPR001156; Transferrin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=C57BL/6J; TISSUE=Bone; MEDLINE=22354683; PubMed=12466851; The FANTOM Consortium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                      seminal plasma.";
Jpn. J. Legal Med. 49:281-293(1995).
HSSP; O77811; IBIX.
GO; GO:0006576; C:extracellular; IEA.
GO; GO:0006579; F:ferric iron binding; IEA.
GO; GO:0006879; F:iron ion homeostasis; IEA.
GO; GO:0006876; P:iron ion transport; IEA.
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                                                                                                                                                 Pfam;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. MEDLINE=96081613;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
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                                                                                                                                                                                                                                                                                                                                                                                                                       "Characterization
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sato I.;
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                                                                                                                    Pro; IPR001156; Transferrin.
PF00405; transferrin; 1.
NCE 38 AA; 4459 MW; 0402
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(TrEMBLrel.
(TrEMBLrel.
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(TrEMBLrel. 13, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
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      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
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Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                       the
                               54.1%;
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Last sequence update)
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Pred. No. 3.3e-14;
5; Mismatches 11
                                                                                                                       1.
0402F490B5EBDDEB CRC64;
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      0
      Score 144.5; DB 4;
Pred. No. 6.6e-13;
0; Mismatches 6;
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based on functional
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Q8WMN8
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01-MAR-2002
01-MAR-2002
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Q7YS20;
01-OCT-2003
01-OCT-2003
01-OCT-2003
            TISSUE=Mammary g
Pecorini C., Fog
"The nucleotide
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                                                                                                                                                                                                                                                                                                              Lactoferrin
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                                         ry gland;
Fogher C.
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EMBL; L77887; AAL40161.1;
G0; G0:0005576; C:extracellular; IEA.
G0; G0:0008199; F:ferric iron binding; IEA.
G0; G0:0006879; P:iron ion homeostasis; IE.
G0; G0:0006826; P:iron ion transport; IEA.
G0; G0:0006810; P:transport; IEA.
InterPro; IPRO01156; Transferrin.
Pfam; PF00405; transferrin; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sus scrofa (Pig).
Eukaryota; Metazoa;
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SMART; SM00094; TR FER; 2.
PROSITE; PS00205; TRANSFERRIN_1;
PROSITE; PS00206; TRANSFERRIN_2;
PROSITE; PS00207; TRANSFERRIN_3;
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Mammalia; Eutheria;
                                      Sus scrofa (Pig).
Eukaryota; Metazoa;
Mammalia; Eutheria;
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Wang S.-R., Lin T.-Y.
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              NCBI_TaxID=9823;
SEQUENCE FROM N
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                                                                                                                                                                                                                                                                                                                                                    77681 MW;
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                                        Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
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on homeostasis; IEA.
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                                                                                                                                                                                                                                                                                              Score 120; DB
Pred. No. 3.4e
lO; Mismatches
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Sus.
                                           Euteleostomi;
Sus.
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Best Local S
Matches 20
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SEQUENCE FROM N.A.

STRAIN-C57BL/6J; TISSUB-Liver;

MEDLINE-2108566); PubMed-11217851;

KAWAI J., Shinagawa A., Shibata K., Yoshino M., Itoh M., Ishii y
Arakawa T., Hara A., Fukunishi Y., Konno H., Kadchi J., Fukuda S
Arakawa T., Izawa M., Nishi K., Kiyosawa H., Kondo S., Yamanaka I
Saito T., Okazaki Y., Gojobori T., Bono H., Kasukawa T., Saito I
Kadota K., Matsuda H.A., Ashburner M., Batalov S., Casavant T.,

Kadota K., Matsuda H.A., Ashburner M., Batalov S., Cochiwa H.,
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01-JUN-2001
01-CCT-2003
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Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1300017J02RIK.
Mus musculus (Mouse).
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01-MAY-2000
01-OCT-2003
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GO; GO:000576; F:ferric iron binding; IEA.
GO; GO:0006879; F:ferric iron bending; IEA.
GO; GO:0006879; P:iron ion homeostasis; IEA.
GO; GO:0006826; P:iron ion transport; IEA.
InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 1.
SEQUENCE 33 AA; 3914 MW; D1904CAE15A73961 CRC64;
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HSSP; O77698; 1CE2.
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Ovis aries (Sheep).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     704 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P., Migliore-Samour D., Fiat A.M.;
Acta 1243:25-32(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=7827104;
                                                                                                                                                                                                                                                                                                                                                                                Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        77522 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
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Last annotation update)
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Pred. No. 7.7e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
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Best Local S
Matches 21
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Best Local S
Matches 20
                                                                                                                                                   Rinaudo J.A.S., Gerin J.L.;
Rinaudo J.A.S., Gerin J.L.;
Rinaudo J.A.S., Gerin J.L.;
"Cross-species hybridization: Characterization of woodchuck liver using human membrane arrays.";
Submitted (ARR-2003) to the EMBL/GenBank/DDBJ data EMBL; AY288100; AAP37129.1; -.
EMBL; AY288100; AAP37129.1; -.
                                                                                                                                                                                                                                                                                                                                                                                          Q7TSX8;
01-OCT-2003
01-OCT-2003
01-OCT-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kuehl P., Lewis S., Matsuo Y., Nikaido I., Pesole G., Quackenbush J. Schriml L.M., Staubli F., Suzuki R., Tomita M., Wagner L., Washio T., Sakai K., Okido T., Furuno M., Aono H., Baldarelli R., Barsh G., Blake J., Boffelli D., Bojunga N., Carninci P., de Bonaldo M.F., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Brownstein M.J., Bult C., Fletcher C., Fujita M., Gariboldi M., Gustincich S., Hill D., Hofmann M., Hume D.A., Kamiya M., Lee N.H., Lyons P., Marchionni L., Mashima J., Mazzarelli J., Mombaerts P., Nordone P., Ring B., Ringwald M., Rodriguez I., Sakamoto N., Sasaki H., Sato K., Schoenbach C., Seya T., Shibata Y., Storch K.-F. Sasaki H., Toyo-oka K., Wang K.H., Weitz C., Whittaker C., Wilming L.
                                                                                                                                                                                                                                                                                                                                          Marmota monax (Woodchuck).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                          Transferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00405; transferrin; 2.
PRINTS; PR00422; TRANSFERRIN.
SMART; SM00094; TR_FER; 2.
PROSITE; PS00205; TRANSFERRIN_1; 1.
PROSITE; PS00207; TRANSFERRIN_3; 1.
SEQUENCE 700 AA; 76765 MW; 38C991D1021AE548 CRC64;
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                                                                                                                                                                                                                                                        TISSUE=Liver;
                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                   Marmota.
                                                                                                                                                                                                                                                                                                                                 Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q7TSX8
                                                                                                                                                                                                                                                                                                NCBI_TaxID=9995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 409:685-690(2001).
EMBL; AK005035; BAB23762.1;
HSSP; P19134; 1TFD.
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Hayashizaki Y.;
12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ); MGI:1919025; 1300017J02Rik.
GO:0005576; C:extracellular; IEA.
GO:0008199; F:ferric iron binding; 1
GO:0006879; P:iron ion homeostasis;
GO:0006826; P:iron ion transport; II
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                                                                        4.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      l Similarity
20; Conser
                                                                                                                      Similarity
                                                                       RSVQWCAVSQPEATKCFQWQRNMRKV---RGPPVSCIKRDSPIQCIQA
                                          KTVRWCAVSDHEANKCVAFRDNMKKVLPADGLRMACVKKTSYLDCIKA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KTIRWCVVSDHEATKCSSFRDNMKKVLPAGGPAVTCVRKMSHPECIR
                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel. 25, Created)
(TrEMBLrel. 25, Last sequence update)
(TrEMBLrel. 25, Last annotation update)
                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
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                                                                                                                   41.0%;
                                                                                                                                                                                                                                                                                                                                 Rodentia;
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                                                                                                     Score 109.5;
Pred. No. 9.9e
12; Mismatches
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Pred. No. 3.8e
13; Mismatches
                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; Euteleostomi; Sciurognathi; Sciuridae; Sciurinae;
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Q7TNX0

PRELIMINARY;

PRT;

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Best Local S
Matches 20
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Best Local S
Matches 19
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Q8VC96;
Q8VC96;
Q1-MAR-2002 (TrEMBLrel. 20, L
Q1-CT-2003 (TrEMBLrel. 25, L
Q1-CT-2003 (TrEMBLrel. 25, L
RIKEN CDNA 1300017JO2 gene.
1300017JO2RIK.
                                                                                                                                                                                 InterPro; IPR001156; Transferrin.
Pfam; PF00405; transferrin; 2.
PRINTS; PR00425; TRANSFERRIN.
SMART; SM00094; TR FER; 2.
PR051TE; PS002075; TRANSFERRIN 1; 1.
PROSITE; PS002075; TRANSFERRIN 3; 1.
PROSITE; PS002077; TRANSFERRIN 3; 1.
SEQUENCE 700 AA; 76795 MW; 7DA4A5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

Xu C.S., Li W.Q., Li Y.C., Han H.P., Wang G.P., Chai L.Q.

Xu C.S., Li W.Q., Li Y.C., Han H.P., Wang G.P., Chai L.Q.

Yang K.J., Yan H.M., Chang C.F., Zhao L.F., Ma H., Wang

Shi J.B., Rahman S., Wang Q.N., Zhang J.B.;

"Liver regeneration after PH.";

Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.

Submitted (JUN-2003) to the EMBL/GenBank/DDBJ databases.

EMBL, AY327504, AAP97736.1;

EMBL, AY327504, AAP97736.1;

SECONTRUCE 698 AA; 76395 MW; B91ABB41CA447194 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2003 (TrEMBLrel. 25, Created)
01-OCT-2003 (TrEMBLrel. 25, Last sequence update)
Liver regeneration-related protein LRRG03
Rattus norvegious (Rat).
Eukaryota; Metazoa; Cro.
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9999
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1300017J02Rin,
Mus musculus (Mouse)
Mus musculus (Mouse)
Metazoa; Chordata;
Metazoa; Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.;
Submitted (JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. TISSUE=Liver;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13
                                                                                                                                                                                                                                                                                                                                                  mitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.

JI, BC021390, AAH21390.1; -.

JI, MGI:1919025; 1300017d02Rik.

GO:0005576; C:extracellular; IEA.
GO:0008199; F:ferric iron binding; IEA.
GO:0008199; F:ferric momeostrasis; IEA.
GO:0006819; P:iron ion transport; IEA.
GO:0006826; P:iron ion transport; IEA.
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20; Conservative
                                                                                                                Similarity
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KTIRWCVVSDHEAIKCSSFRDNMKKVLPAGGPAVTCVRKMSHPECIR
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              39.9%;
                                                                                                                39.9%;
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                                                                                          Score 106.5; I
Pred. No. 2.6e-
13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
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Sciurognathi; Muridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; E
Sciurognathi; Muridae;
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                                                                                                                                                                                         7DA4A580CBB6BF37 CRC64;
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                                                                                                                   .6e-06;
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RESULT 14
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Q7TMC7 Q7TMC7;

PRELIMINARY;

PRT;

979 AA

Search completed: Job time : 90.96 :

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Ab2-417 (CC1-8)
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                                                                                       SEQUENCE FROM N.A.

Xu C.S., Li W.Q., Li Y.C., Wang G.P., Chai L.Q.,

Xu C.S., Li W.Q., Li Y.C., Wang G.P., Chai L.Q.,

Yan H.M., Chang C.F., Zhao L.F., Ma H., Wang L.,

Shi J.B., Rahman S., Wang Q.N., Zhang J.B.;

"Liver regeneration after PH.";

Submitted (JUN-2003) to the PHBL/GenBank/DDBJ date

EMBL; AY325230; AAP92631.1;

SEQUENCE 980 AA; 107445 MW; 73B3AC3977E640FE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.

XU C.S., Li W.Q., Li Y.C., Chang C.F., Zhao L.F., Ma H., Xu C.S., Li W.Q., Li Y.C., Chang C.F., Chai L.Q., Yuan J.Y., Ya Wang S.F., Han H.P., Wang G.P., Chai L.Q., Yuan J.Y., Ya Yan H.M., Shi J.B., Rahman S., Wang Q.N., Zhang J.B.;

"Liver regeneration after PH.";

Submitted (UUN-2003) to the EMBL/GenBank/DDBJ databases.

EMBL; AY325214; AAP92615.1; -.

EMBL; AY325214; AAP92642.1; -.

EMBL; AY325214; AAP92642.1; -.

EMBL; AY325214; AAP92642.1; -.
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Mammalia; Eutheria; Rodentia;
MCBI_TaxID=10116;
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Mammalia; Eutheria;
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13; Mismatches
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117.402 Million cell updates/sec
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Aas78916 Human lac
Aaz85146 Lactoferr
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Aar2424 Human lac
Aay31153 Human lac
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Aar11664		82	234	Aab36843	Aab08182	Aab03831	Aay77578	Aaw86021	Aaw53880	Aaw57317	Aaw09342	Aar43653	Aar08033	Ade76659	Aab36842	Aab03830	Aay77577	Aaw53879	Aaw21695
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ALIGNMENTS

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Bifidogenic peptide; protease; treatment; microbe-related disease; bacteria; fungi; yeast; protozoa; virus; mycoplasma; filaria; plasmodia; infection; inflammation; microbial induced tumour; degenerative disorder; diarrhoea; colic; oral microflora; intestinal microflora; caries;
                                                                                                                                                                                                                                                                                       Bifidobacterium bifidum
                                                                                                                                                                                                                                                                                                                                                                 Bifidobacterium bifidus stimulating peptide 22
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25-JUN-1999
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                                                                                                     Claim 2; Page 3; 25pp; German.
                                                                                                                      Milk-derived peptides that stimulate Bifidobacterium bifidus
                                                                                                                                         WPI; 1999-244022/20.
                                                                                                                                                                                                   16-SEP-1997;
11-FEB-1998;
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                                                                                                                                                                                                                                                                                                          microflora.
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98DE-01005385.
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This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from borvine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing Bifidobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-B0)-(Ew-E0) is at least 0.15 are

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RESULT 2
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This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bovine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below 25 mM (by dialysis or reverse-phase HPLC) and tested for activity by growing Bifidobacterium bifidus and Escherichia coll in presence of the fractions. Those fractions for which (Bw-B0) - (Bw-B0) is at least 0.15 are selected where Bw = germ count after 16 hr culture of B. bifidus in 50% Elliker broth containing peptide at 0.2 mg/ml, BO = germ count under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                selected where Bw = germ count after 16 hr culture of B. bifidus in 50% Elliker broth containing peptide at 0.2 mg/ml, B0 = germ count under similar conditions in a peptide-free control, Ew = germ count after 16 hr culture of E. coli in 3 g/l tryptic broth containing peptide at 0.2 mg/ml, E0 = germ count under similar conditions in a peptide-free control. The peptides AAW93865-W93888 are used to treat microbe-related diseases caused by bacteria, fungi, yeast, protozoa, viruses, mycoplasma, filaria and plasmodia, e.g. infections, inflammation, microbially induced tumours or degenerative disorders, diarrhoea, colic, abnormalities in oral, intestinal or vaginal microflora, or caries. (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Milk-derived
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11-FEB-1998;
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98DE-01005385
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Σ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ħ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protease; treatment; microbe-related disease;
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RESULT 3
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Best Local :
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This invention describes milk-derived bifidogenic peptides and their active derivatives or fragments, and combinations of them produced by chemical coupling. Such are produced from bovine or human milk by treatment for 2 hr with proteases, then centrifuging to remove fat and acidifying to pH 2 to precipitate proteins. The solution phase is then subjected to reverse-phase high-performance liquid chromatography (HPLC) and cation-exchange HPLC, the fractions adjusted to salt content below meaning the performance of the fidobacterium bifidus and Escherichia coli in presence of the fractions. Those fractions for which (Bw-B0) - (Ew-B0) is at least 0.15 are selected where Bw = germ count after 16 hr culture of B. bifidus in 50% Elliker broth containing peptide at 0.2 mg/ml, Bu = germ count under similar conditions in a peptide-free control, Ew = germ count after 16 hr culture of E. coli in 3 g/l tryptic broth containing peptide at 0.2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        similar conditions in a peptide-free control, EW = germ count after 16 hr culture of E. coli in 3 g/l tryptic broth containing peptide at 0.2 mg/ml, E0 = germ count under similar conditions in a peptide-free control. The peptides AAW93865-W93888 are used to treat microbe-related diseases caused by bacteria, fungi, yeast, protozoa, viruses, mycoplasma, filaria and plasmodia, e.g. infections, inflammation, microbially induced tumours or degenerative disorders, diarrhoea, colic, abnormalities in oral, intestinal or vaginal microflora, or caries. (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                               Claim 2; Page 3; 25pp;
                                                                                                                                                                                                                                                                                                                                WPI; 1999-244022/20.
                                                                                                                                                                                                                                                                                                                                                                                                                                    16-SEP-1997;
11-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bifidogenic peptide; protease; treatment; microbe-related disease; bacteria; fungi, yeast, protozoa; virus; mycoplasma; filaria; plasmodia; infection; inflammation; microbial induced tumour; degenerative disorder; diarrhoea; colic; oral microflora; intestinal microflora; caries;
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                                                                                                                                                                                                                                                                                                peptides that stimulate Bifidobacterium
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(first entry)
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98DE-01005385.
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91.7%;
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RESULT 4
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Matches 11
                            AAW71180-83 represent N-terminally truncated human lactoferrin proteins. The lactoferrin variants bind heparin with lower affinity than natural lactoferrin. The lactoferrin variants exhibit biological activities such as anti-inflammatory, anti-viral and anti-infective activities as well as a pro- and anti-coagulant effects, modulation of complement activation, inhibition of LPS mediated activation of neutrophils, inhibition of myelopoiesis, regulation of transcription, growth promotion of intestinal epithelial cells, inhibition of hydroxyl-radical formation, and a role in intestinal iron uptake and excretion, note: this sequence does not appear in the specification; it was created using information provided
                                                                                                                                                                                                                                                                         Compositions containing human lactoferrin and variants - autreating e.g. anaemia, iron-storage disease, inflammation, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mg/ml, E0 = germ count under similar conditions in a peptide-free control. The peptides AAW93865-W93888 are used to treat microbe-related diseases caused by bacteria, fungi, yeast, protozoa, viruses, mycoplasma, filaria and plasmodia, e.g. infections, inflammation, microbially induced tumours or degenerative disorders, diarrhoea, colic, abnormalities in oral, intestinal or vaginal microflora, or caries. (Updated on 27-AUG-2003 to correct OS field.)
                                                                                                                                                                                                                                                                       treating e.g. anaemia, iron-stora rheumatoid arthritis, ulcerative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human lactoferrin
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02-FEB-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic.
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98US-00017043
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91.7%;
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                                                                                                             The sequence represents the human lactoferrin (hLF) protein variant hLF-SN. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious disease, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoleses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the partient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administrated. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence
                                                                            Sequence
                                                                                                     given
                                                                                                                                                                                                                                                                         Claim 10;
                                                                                                                                                                                                                                                                                                                                       WPI; 2001-648424/74.
                                                                                                                                                                                                                                                                                                                                                                                                                 27-MAR-2000;
27-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human; lactoferrin; hLF; infectious disease; inflammatory disease; excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiese; reperfusion injury; cytokine release; proteoglycan; hLF-5N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human lactoferrin variant hLF-5N.
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                                                                                                                                                                                                                                                                      Page; 49pp;
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2000US-0193352P.
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RESULT 7
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Matches 11
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Compositions containing human lactoferrin and variants - are used for treating e.g. anaemia, iron-storage disease, inflammation, tumours, rheumatoid arthritis, ulcerative colitis or infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         03-FEB-1997;
02-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-FEB-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anti-infective; coagulant; complement activation; inhibitive mediated activation; myelopoiesis; growth promotion; intestinal epithelial cell; hydroxyl-radical formation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; lactoferrin protein; variant; anti-inflammatory; anti-viral;
anti-infective; coagulant; complement activation; inhibition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAW71182 standard;
 Human; lactoferrin;
                             Human
                                                       22-JAN-2002
                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nuijens J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           06-AUG-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9833509-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mutant human lactoferrin protein designated hLF-4N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAW71182;
                                                                                  AAG77910;
                                                                                                         AAG77910 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       intestinal iron
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (PHAR-) PHARMING BV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-437164/37.
                                                                                                                                                                            337
                             lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2; Page;
                                                                                                                                                                                                                                11;
                                                                                                                                                                                                     1 ARRARVVWAAVG 12
                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                      889
                                                                                                                                                                            ARRARVVWCAVG 348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Van Berkel
                                                                                                                                                                                                                                Conservative
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                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           70pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         97US-0036859P.
98US-00017043.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      uptake; excretion.
                             variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein;
  hLF; infectious
                                                                                                                                                                                                                                             93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PHC;
                             hLF-4N
                                                                                                             889
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                                                                                                                                                                                                                                Score 56; DB Pred. No. 0.24 0; Mismatches
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    disease; inflammatory disease;
                                                                                                                                                                                                                                             DB 2;
0.24;
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RESULT 8
AAW71181
ID AAW7
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                             The sequence represents the human lactoferrin (hLF) protein variant hLF-4N. The invention relates to novel methods of treatment using high doses of lactoferrin. The methods of the invention are useful for the treatment or prophylaxis of infectious diseases, inflammatory diseases and excess of heparin e.g. gastroenteritis, inflammatory bowel disease, sepsis, anaemia, myelopoieses, reducing reperfusion injury, cytokine release and proteoglycan-mediated entry of virus into cells. The advantage of the method is that the patient is substantially free of side effect responses to administration of lactoferrin. Therefore large doses of lactoferrin can be administrated. Note: The present sequence is not shown in the specification but is derived from human wild-type lactoferrin sequence
                                                       Human; lactoferrin protein; variant; anti-inflammatory; anti-infective; coagulant; complement activation; inhibition; LPS mediated activation; myelopoiesis; growth promotion; intestinal epithelial cell; hydroxyl-radical formation; intestinal iron uptake; excretion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    excess of heparin; gastroenteritis; inflammatory bowel disease; sepsis; anaemia; myelopoiese; reperfusion injury; cytokine release; proteoglycan; hLF-4N; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                    given in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 10; Page; 49pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Use of lactoferrin for diseases and excess of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Van Bree JBMM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-MAR-2000; 2000EP-00201110
27-MAR-2000; 2000US-0193352P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Key
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                              Synthetic
                                                                                                                                               Mutant
                                                                                                                                                                            27-OCT-1998
                                                                                                                                                                                                        AAW71181;
                                                                                                                                                                                                                                   AAW71181 standard; protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (PHAR-) PHARMING INTELLECTUAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001-648424/74
                                                                                                                                                                                                                                                                                                          337 ARRARVVWCAVG 348
                                                                                                                                                                                                                                                                                                                                     ш
                                                                                                                                                                                                                                                                                                                                                                  11;
                                                                                                                                               human
                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                          688
                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                     ARRARVVWAAVG
                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                          A.
                                                                                                                                               lactoferrin
                                                                                                                                                                                                                                                                                                                                                                                                                                                     sequence listing of the specification
                                                                                                                                                                           (first entry)
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24. .27
/label= Cationic_do
                                                                                                                                                                                                                                                                                                                                                                                93.3%;
91.7%;
                                                                                                                                                                                                                                                                                                                                     12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treatment heparin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cationic_domain
                                                                                                                                               protein designated hLF-3N
                                                                                                                                                                                                                                     689 AA
                                                                                                                                                                                                                                                                                                                                                                  Score 56; DB
Pred. No. 0.24
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      of infectious diseases, inflammatory
                                                                                                                                                                                                                                                                                                                                                                                DB 4;
0.24;
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                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                     anti-viral;
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                                                                                                                                                                                                                                                                                                                                                                    Gaps
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sapiens